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THE
PHYSICIAN'S GUIDE,
BEING A
POPULAR DISSERTATION
ON
FEVERS, INFLAMMATIONS,
AND ALL DISEASES CONNECTED WITH THEM;
COMPRISING
OBSERVATIONS ON THE USE AND ABUSE OF
BLOOD-LETTING,
MERCURY, CATHARTICS, STIMULANTS, DIET,
&c. &c. &c.

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Worcester :

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THE HISTORY OF THE

ROYAL SOCIETY OF MEDICINE

AND OF THE MEDICAL PROFESSION



BY JOHN HENRY WELLCOME

WITH A PREFACE BY THE VICE-CHANCELLOR OF THE UNIVERSITY OF LONDON

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PREFACE.

AN introductory essay to the present publication having been some time since pretty widely circulated, and favourably received; it may now be necessary to state, that the work here presented to the public is the result of an attention, which hath been sedulously bestowed upon the subjects for a series of years; and its object is to explain the nature, causes, prevention, and treatment of the diseases specified in the title page; likewise an enquiry into the nature and origin of scrofula and pulmonic complaints, as also those derangements of some internal organs, usually but erroneously, termed bilious, &c., &c.; together with the state of medicine in Great Britain and in some foreign countries; and, to exhibit at one view, the most important and necessary parts of knowledge for the physician to be acquainted with in the practice of medicine. Febrile and inflammatory affections in general have been made the basis for most of the principles attempted to be established; but the most opposing and perplexing extremes of opinion exist in all the affairs and circumstances of practice, and every practitioner, who has had the experience of a few years only, must feel how much of his time has been wasted in unprofitable toil, in wading through volumes to be at last rewarded by a solitary gem; the value of which has been diminished to nothing by the labour of the acquisition. In the following pages the reader will find what he most desires, instruction without toil; and I may confidently assert that no disease is here brought

forward, but what has repeatedly, in all its stages and forms, fallen under my own observation.

A work exhibiting the characteristic theories, and more especially the practice of the most illustrious professors and teachers of all ages and countries ; calling up a rapid succession of interesting recollections, new associates, new images, and new ideas ; a body of knowledge, in fact, so universal, and at the same time so systematically sub-divided, as to admit both of habitual reference and of practical adaptation, is, I presume, a great and important *desideratum*—a *desideratum*, the hope of supplying which, or, at least, of laying its foundation, has given birth to the present undertaking ; and while I can say with truth, that no source of information within my reach has been left unexplored, I must claim for myself the right of having exercised a large, yet sound, discretion in stating the result of my own experience.

The present state of medicine, practical as well as theoretical, so far from being fixed upon any regular or defined code of rules or laws, would seem to be a mere system of jargonic contradictions. Hence medical men are, in their writings, as well as in their conferences, either involved in angry disputations and irreconcilable quarrels, or the difficulty of uniting their sentiments is so great, that there is often a most decided opposition between the plan of cure, and the remedies proposed by the several parties. As Giacomo Tommasini, an eminent Italian physician, justly observes, there are, on one side, purgatives, diluents, cooling medicines, to bring down the strength ; on the other, corroborants, tonics, and stimulants, are insisted on. Here, blood-letting, manna, tamarinds, saline drinks, and cathartics ; there, ether, musk, ammonia, wine, and opium. Such is the contrariety of opinion, that conciliation is impossible ; and it becomes necessary either that one of the consulting parties should give in altogether, or else, each resolving to mix up something of his

own in the prescription, a farrago is compounded, containing drugs of opposite and contending qualities, one actually annihilating the effects of the other. In the minds of some of my readers, these remarks may very possibly awaken dormant recollections, and in the progress of the work the results of some fashionable consultations will be specified. I would, however, much rather endeavour to produce co-operation among medical men; to conciliate for them reverence and esteem, by producing instances of the various good works in which they are instrumental; to consolidate their exertions, and direct them to the most judicious plans of treating diseases; and to prove what they are capable of effecting by prudent zeal, and cordial unanimity, than to produce irritation and discontent;—and if, by the instrumentality of its pages, practical good can be promoted; if what is evil can be counteracted or repressed; if any sophistry, which injures the cause of unity and truth, shall be detected, any errors of judgment *popular* as well as *professional*, be prevented or removed, and converted into an engine of unquestionable general utility,—the Physician's Guide will not appear in vain. But many of the modes of cure, recommended in the succeeding pages, materially differ from those taught by certain medical professors and lecturers; and on many occasions I have been necessitated to dissent pointedly from the doctrine of some noted authors. Whatever regard or admiration I may entertain towards men justly celebrated for their rank and scientific acquirements, I am morally bound to maintain what my own experience has satisfactorily proved to me to be efficacious, how much soever it may oppose prevailing opinions.

The mazy labyrinth of a mass of heterogenous notions, in Great Britain, as likewise in foreign parts, respecting the nature or essence of every disease, and the operation of every remedy, is such, that I soon found the useful was not to be *discriminated* from that which is frivolous

or erroneous, without much toil and experience. In opening the various treatises with which the press is laden, how discrepant do we still find the sentiments of our brethren. Each different writer has framed an hypothesis of his own, and has laboured hard to support it; and I have employed a great deal of laborious research in order to collect something like truth from their contradictory accounts. It has been my chief aim to ascertain facts more than maintain opinions; to study the economy of nature, rather than to shackle her with conjectural or inconsistent theories. Indeed, I have throughout been desirous to communicate useful information for the benefit of the community, confining my attention chiefly to the points of real *practical* importance, by avoiding as much as possible all hypothetical speculations and controversial discussion. It is indeed much to be lamented, that we are so little benefited by the errors and failures of our predecessors; and that our knowledge must be so dearly purchased in the school of experience, to be profoundly directed. This would be of comparatively trivial moment, did the consequences devolve upon ourselves only; but it assumes a widely different aspect and interest, when the lives that are entrusted to us become the price at which wisdom is to be purchased. Fever, inflammation, and their treatment, are three important topics, or medical disquisitions, upon which the judgment of the faculty are still far from being unanimous. Some writers talk, with the utmost *sang-froid*, of bleeding their patients till the shades of death encompass them about, and it becomes requisite to interpose strong stimulus, or the individual sinks; while others turn as pale almost as the half killed patients of their bolder brethren, at the very notion of taking away blood at all in such a complaint as fever.

In an individual case, an effect may be evident, and a superficial judge may imagine that he sees the cause e-

qually apparent : but by extending his observations to a greater length, he will probably perceive the same effect where a like cause does not exist ; and consequently his first supposition must have been illusory. It follows, then, that an author who undertakes to write on such a subject, should possess judgment in discriminating between *real* and *pretended* discoveries, ought to be unfettered by prejudice, and should not give himself up to premature experiment, or to theory unaided by experience ; but to compare his own inferences and those of preceding writers with the result of actual inspection, made under as many similar and dissimilar circumstances as the case admits. Such have been my views ; and I have studied the writings of our several predecessors and contemporaries with the greatest attention ; compared and examined their hypotheses and deductions ; and have submitted them, at the bedside, in the abodes of sickness and death, to the test of observation.

Hence, in the consideration of blood-letting in febrile and other diseases, I have endeavoured to reduce it to plain and easy principles of practice ;—to fix it on a basis of pathology which will be confirmed by actual observation and experience ; and this I would gladly hope has been completely accomplished, at least, it is so, with respect to most acute fevers ; for, however varied may be their causes, and external symptoms, still the chief effects on the vital organs are few and almost uniformly the same ; a circumstance which appears to have been calamitously overlooked, even by our best systematic writers, and the dogmas of the schools had not only opposed, but nearly proscribed for a while what nature and observation had pointed out from the earliest period of medicine to the present time, in all climates. Indeed, the bounding pulse, the fever-flushed cheek, the suffused eyes, the throbbing temples, and the aching head, must have vindicated the propriety of blood-letting in every age, and in every mind not

warped by the bias of some fashionable doctrine. Nevertheless the same species of fever, (and it cannot be too much impressed on the memory), may have varieties so different, as to require not only different methods, but great modifications of even the same treatment; our means should therefore be changed according to the nature of those varieties, that they may, generally speaking, be safe in each, and efficacious in all. These circumstances are carefully and amply pointed out in the following pages.

All the other most improved methods for the cure of febrile and inflammatory disorders, are fully noticed; and to trace the rise and fall of many of those remedies which were once, or still are, so celebrated in medicine, is not only amusing, but even a most instructive task. It is therefore of the utmost importance that practitioners, the junior ones more especially, be guarded against an undue partiality on the one hand, and an undue prejudice on the other. The opinions of medical men on the important subject of mercurializing the system in the above diseases, are extremely discordant; some recommending, and others wholly discarding it; but I sincerely hope, that I have satisfactorily settled this great and momentous practical question, by clearly pointing out the indications and contra-indications for the use of mercury.

The author will embrace the opportunity to state the *rationale* of his opinion respecting the intimate connexions which those diseases commonly called medical or constitutional, surgical or local and external, and mixed or compound, have with each other, and the great practical utility of a correct knowledge of these facts.

Worcester,
June 23rd, 1821.

FEVERS

AND

INFLAMMATION.

OF all the general and partial derangements of the animal economy, constituting disease, **FEVERS** and **INFLAMMATION** are, under a variety of modifications, by far the most numerous, being of daily and hourly occurrence in the practice of medicine; but it has long been my opinion that inflammations have not been properly understood—I mean that all the organs concerned in their development have not been sufficiently considered; and that one or other has been usually adopted to the exclusion of the rest, which partial views taken of the more complicated operations of the living system, have given rise to the many speculative theories and opposite doctrines of celebrated men. As the effects of inflammation vary much in the different textures of the human frame, it is of the utmost importance to distinguish accurately the diseased alterations that take place in these several textures when inflamed. I believe, for reasons which will afterwards be given, that all local diseases begin in morbid nervous action, and that the blood-vessels are the secondary agents, and not the first, as many physiologists suppose, by which most of the changes are affected in an inflamed part. The consideration therefore, of the na-

ture and treatment of fevers and inflammations, will rest principally on the condition of the nervous and sanguiferous systems, the skin and mucous membranes, at the same time not forgetting the lymphatic system, &c.

Although many valuable works on fever have lately appeared, yet writings of this nature still engage our attention, almost as much as though the discussion of the subject were perfectly new; because we certainly have much to learn regarding the phenomena of this disease, that relates in a very connected manner to numerous important indications for its medical treatment. Indeed it is very generally acknowledged, that local inflammation, or topical disease exhibiting the sensible characteristics of inflammation, ever attends fever; yet it is much doubted whether this topical inflammation be the result of the more general disturbance of the system, a casual contingency, or the primary and indeed the essential cause of its development. Those who favor the last opinion argue, further, that this inflammation must exist in a particular organ, as the brain, &c.; whilst others again consider that its seat is necessarily in the mucous membrane. The notion that irritation of the mucous membrane of the alimentary canal is the essential cause of the symptoms which are generally considered to characterize fever, originated from the sympathy of the stomach. I consider the reality, however, of this doctrine, so far as respects *eruptive fevers*, to be very probable. This subject will again come under consideration when noticing the sympathies of children and the diseases of their mucous membranes.

At any rate the discovery of the truth must here be considered a most important object; because, certainly, though the doctrine that fever is intimately connected with an inflammatory diathesis, has led to the general employment of the most noble and beneficial remedies, a more correct knowledge of the relations above mentioned must empower us how to exhibit several efficacious aux-

iliaries with much more effect than we can otherwise do, with our indistinct ideas of the order and relations of the nature of the distemper, I am of opinion that inflammation may, and often has, a primary origin in a part, and afterwards if severe, produce fever; and *vice versa*, fever may be at first general increased excitement, and when local inflammation of a viscera or part comes on, which generally occurs sooner or later, it is to be considered a consequence and not a cause. That indeed the derangement of the system of functions which forms fever, is very closely allied in its phenomena to the disorder that attends the inflammation of certain organs, is an opinion which I am happy to say is daily gaining ground among medical practitioners. It may indeed seem strange that they have been so long in arriving at it, more especially when we consider the striking similarity in the phenomena of these maladies. Fever of almost every description, is frequently so closely imitated by the morbid conditions that take place in the phlegmasiæ, as to render it requisite to make a very diligent search into circumstances, in order accurately to distinguish them.

Whether fever and inflammatory disease are the same, in respect to the disordered action which institutes them, will remain rather a matter of curiosity than of useful enquiry, so long as we are ignorant in what inflammation absolutely consists. One party of physiologists say that inflammation is increased action of the arteries, another that it is lessened action, and a third declares that the arteries are never capable of any action at all, how then shall we ever be able to throw much light on the nature of fever, even had we the power to prove that fever is actual inflammation.

Doctors Wilson Philip and Hastings have published hundreds of pages of their experiments on cats, dogs, rabbits, frog's feet, &c. and after ringing changes on these and "capillary debility," console themselves by saying,

“We have been enabled to arrive at very probable conclusions concerning the state of the sanguiferous system,” viz. that inflammation is *debility* of the capillary vessels, and they further assert that “the redness necessarily follows from *weakness* and consequent distension of the capillaries.” They appear to me, however, to set out with erroneous principles in supposing that debility or weakness is the cause of inflammation ; at any rate their arguments seem far from being cogent. But it must be curious to observe with what difficulty we have to arrive at the truth on medical matters. The Edinburgh Medical and Surgical Journal, a work of great respectability, at page 585, vol. 15, tells us, in reviewing the *Precis de Physiologie* of Dr. Magendie, that “he ridicules with great propriety and effect, the notion of a peculiar automatic action of the capillary vessels, and they are astonished that *practical* men should still, occasionally, continue to amuse themselves with conjectures so utterly incapable of confirmation.” But at page 95 of the same volume, in reviewing Dr. Parry’s *Pathology and Therapeutics*, they “have no doubt whatever of the inherent contractile powers both of the arteries and capillaries—powers quite independent of the heart.” Dr. Parry contends, and I perfectly agree with him, contrary to Bichat and Dr. W. Philip, and other modern physiologists, that the heart alone is sufficient to carry on the blood through the entire march of the circulation, without any aid from the muscular power of the arteries, or the oscillatory power of the capillaries. That the blood-vessels, however, have the power of collapsing and dilating is proved daily, and though my reasoning may want further consideration, I would say that the heat and dryness of the skin in fevers shew the capillaries to be in a state of increased strength and activity, rather than that of debility. I do not mean, however, nay I deny that the arteries, the carotids for instance, ever beat faster or quicker than the heart ; but to

shew that the arteries are possessed of an irritable power, from nervous influence, which is speedily communicated to the heart, I shall, under the head of appoplexy, relate a *practical* circumstance of great importance.

Doctors Hastings and W. Philip aver, that “the symptoms generally present in an inflamed part, are redness, swelling, pain, and increased temperature. The doctrine of debilitated capillaries doubtless affords,” (according to them) “a more rational account of the disease than any of the favoured hypotheses of the day ; yet some of the symptoms are so intimately connected with affections of the nerves, that no satisfactory account,” they say, “can be given of them.” They say further, “we find our ignorance on this subject most embarrassing when we attempt to explain those symptoms which attend inflammation.” See Dr. Hasting’s Treatise, page 108. I must, however, entirely disagree with these gentlemen, and assert, that inflammation, or inflammatory excitement, is neither more nor less than excitement of nerves, with a distension of the blood-vessels, to which may be added, a chemical change of the blood, especially if the nerves continue any length of time morbidly affected ; and this plain, simple, and clear averment, at once overthrows the whole of their sublime flights of fancy about the doctrine of debilitated capillaries, while the symptoms which attend inflammation are easily explained, as will be seen in future pages, and will, I trust, lead to a successful treatment. From the extensive knowledge which we already possess in rectifying the human machine when out of order, the practice of medicine ought not now to be denominated an “infant science,” and fortunately the operations and laws even of the nervous system are for the most part more cultivated and much less hidden from our view than these investigators and experimentalists seem to imagine ; and others as well as myself shall consequently, in endeavouring to trace the

share which it has in producing inflammation, have to hail the light and rejoice at our increasing knowledge, the facts already collected being considerable, and, for the most part satisfactory. “Physiologists have often erred,” says Dr. Cooke, a most *experienced* practitioner and an eminent *practical* writer, “by paying more attention to “the investigation of the nature of the subject of their enquiries, than to that of the laws by which they are governed. Of the *ultimate nature or essence*, either of “mind or matter, or of that compound which we call the “nervous system, we know nothing; but of the laws by “which it is governed, or rather the circumstances by “which it is influenced, we know enough to enable us, “in some degree at least, to understand the nature and “causes, and to explain the phenomena of many of its “morbid affections.” Dr. Reece very judiciously observes, “some practitioners imagine that more real service would be rendered to medicine by a full illustration “of what is already known on the subject, than by any “further attempt to promulgate new theories or new “modes of practice. Impressed with the justice of this “opinion, Dr. Cooke, who is fellow of the London College of Physicians, and late Physician to the London Hospital, has apparently taken considerable pains in collecting and arranging, in plain, clear language, a variety “of observations from the best authors, both ancient and “modern, relative to the principal diseases of the nervous “system. The Doctor observes, if the example he has “set should be followed by others, a system of medicine “would be formed, which might prove eminently useful, “by lessening the labours of the student, and by affording “practical facilities to persons actually engaged in the duties of the profession. The undertaking of the work,” says Doctor Reece, “is most praiseworthy; and of all the “physicians of this metropolis, or indeed of Europe, we “know none more competent to the task than Dr. Cooke;

“but with respect to the result, even if he be as ably followed up by others as commenced by the Doctor, we entertain great doubts of their being such as the author anticipates.” To all which I most sincerely subscribe. Permit me, however, further to say, and I believe it may be considered as an axiom, that no system will ever much promote medical science, or bring it near that perfection of which it is susceptible, until the *public* can be made to see the destructive errors of the present, and the value and necessity of every medical man being *practically* acquainted with *all* the branches of the profession. Our knowledge may then be concentrated and illustrated on all points to great and manifest advantage, and a luminous system of medicine erected not only on scientific and practical, but simple and fixed principles. More of this however will be noticed. But unfortunately for suffering humanity, very many are still on this subject most completely in the dark. The laudable endeavours, however, that many of the faculty are now making to enlighten the public on medical matters, and the independent support that they are giving to establish the plan which I have just stated, together with the consequent improvements it has already brought about in the medical art, are among the most important circumstances of the times in which we live; and although they may have attracted less attention than other passing events, yet such occurrences must forcibly strike those who shall hereafter review past transactions; because their beneficial effects will not be limited to the present, but will extend to the remotest posterity.

Dr. W. Philip, under treatment of continued fever, page 181, says, “I have in the preface given a short outline of my opinion of the nature of fever. The debility which in inflammation takes place in the capillaries of a part, appears to take place in those of the whole system in fever; and as inflammation is removed by restoring due action of the capillaries of the inflamed part,

“fever is removed by restoring that of the capillaries of
 “the whole system. To this conclusion, as far as I am
 “capable of judging, the experiments which have been
 “made with a view to ascertain the nature of inflamma-
 “tion, when compared with the phenomena of fever,
 “lead.” Dr. Hastings, at page 113, makes a long quota-
 tion from Dr. Philip on the principles and treatment of
 inflammation, which he thinks “is so evident, as to ren-
 “der it unnecessary to add any thing on the subject.”
 With both these gentlemen, I must again beg leave to
 differ, as I regard the contents of the quotation as very
 inconclusive, and unsatisfactory. They are also inconsis-
 tent with their own theory, for they contradict their own
 mode of reasoning in different parts of their works.
 These I shall more particularly investigate and illustrate
 at some future opportunity, my present limits not per-
 mitting a detail of them. The Medical Repository says,
 “What Drs. W. Philip and Hastings call capillary de-
 “bility, other physiologists would probably term conges-
 “tion.” Dr. Seeds, by his experiments in destroying
 dogs by bleeding, has shown, that venous congestion takes
 place not from mere local debility, but from weakness of
 the heart in carrying on the march of blood. This dis-
 covery is of considerable value in a practical view, for it
 greatly assists to prove that stimulants, may really be
 highly applicable and useful in a certain stage and con-
 dition of fever, &c., and that how, in the stage of excite-
 ment, they produce the most fatal mischief. If inflam-
 mation be capillary debility, how does it happen, that
 Dr. W. Philip would exhibit for its cure, astringent
 stimulants, while, on the contrary, Dr. Hastings employs
 digitalis, a powerful sedative—a medicine calculated to
 subdue vascular action—in order to cure, according to his
 notions, a disease of debility. The discrepance of opin-
 ion respecting whether digitalis was a sedative or stimu-
 lant, at one time much agitated the medical public.

Prussic acid, as a medicine, has lately been brought into notice, and the use of colchicum revived. These, by acting as direct sedatives on the nervous system, are general remedies of great influence, in diseases which are concerned with increased action of the heart and arteries; and consecutively, powerful assistants to, (not substitutes for) bleeding, in the treatment of inflammatory disorders, both acute and chronic. It is true, however, that in some chronic complaints where the sanguiferous repletion is trifling, they may be substituted for bleeding, but where the blood-vessels are overloaded, and the disease acute, more especially if some important organ be attacked, they should never be trusted to alone. The proper period for administering sedatives in the cure of diseases of excitement, will hereafter be more fully stated, but as the colchicum is at present exhibited in some inflammatory cases in a manner most unequivocal, and to a surprising extent, it will not be irrevelant to take some further notice of it in this place. A treatise on the powers of the root of the colchicum, or meadow saffron, in subduing inflammatory action, without the aid of bleeding, has recently been published by Mr. Haden, a scientific surgeon, of Chelsea; by which we are told, that his father, a surgeon of eminence in Derby, has been many years in the habit of prescribing the remedy in a variety of inflammatory disorders, especially rheumatism, gout, incipient consumption, &c., with so much success, as to render bleeding unnecessary. "In pure inflammation," he says, "if it be given every four hours, until it produces an abundant purgative effect, the pulse will become nearly natural, from being either quick or hard, or slow and full." This he has known to happen before purging has taken place, and the effect to be so certain, that he never had recourse to bleeding, unless inflammation existed to an alarming degree, in a vital part, and then never more than once. He adds, "fevers and inflammation so removed,

“never require the use of tonic medicines during con-
 “valescence ; the patients, indeed, generally appear to be
 “as well as though they had not at all been the subjects
 “of disease ; and although it sometimes happens that a
 “recurrence of the symptoms takes place, it is of a much
 “milder degree ; and the new disorder is always imme-
 “diately removed by a very little of the same treatment.”
 Mr. Haden, junior, observes, that “the sensible effects of
 “the colchicum appears to be to control the action of the
 “heart and arteries, and indeed often to reduce that ac-
 “tion below that of the standard of health. This effect
 “(he says) is frequently produced long before its sensible
 “effects are apparent ; but when continued long enough,
 “and generally before its remedial virtues are decidedly
 “obtained, purging takes place.” This remedy, he with
 great propriety remarks, is “a very powerful one, and
 “therefore either for good or for evil. It is not a medicine
 “to be played with, nor a weapon to be wielded by unskil-
 “ful hands, without danger. Like the lancet, if used im-
 “properly, or pushed too far, it will bring with it regret
 “or disappointment ; but, like the lancet, it will amply
 “repay him who uses it skilfully, and with due caution
 “and moderation.” Mr. Haden, not having tried the
 seeds, gives a preference to the dried root, in powder.
 With respect to gout, I believe no drug or medicine in
 nature possesses the power of acting specifically upon it ;
 but that the effects produced depend merely and entirely
 upon the remedy operating sedatively, although inciden-
 tally and transiently on the nervous system, relieving,
 temporary, the general disturbance or morbid sensibili-
 ties of the habit ; and likewise some increased secretion
 occasioned by such medicine ; thus putting aside as it
 were, or suspending, for the time present, an impending
 or commenced paroxysm of the gout. And that, what-
 ever drug or composition, possesses the power of effect-
 ing the required secretions, together with a sedative or

anodyne quality, will be a remedy equal in efficacy to the colchicum, or any imitation of it. The secretions I chiefly allude to, are, primarily, those of the digestive organs ; secondarily, by the skin, or perspiration ; and, thirdly, by the bowels. No doubt the colchicum, or any medicine possessing similar powers, might act successfully by its strong sedative powers alone, as we know happens from a somewhat similar cause, by sudden danger, alarms, &c. ; but what would be the state of the patient if a system of this kind was persevered in ? In many cases of gout and rheumatism, I have considerably imitated the effects of the colchicum by a combined treatment of jalap, calomel, and the compound powder of ipecacuanha. The root of the colchicum operates more violently on the stomach and intestines, and acts more powerfully on the arterial system, than the seeds ; and at the same time, is less efficacious in the cure of gout and rheumatism. Indeed, the seeds, as Dr. Williams, of Ipswich, (to whom the profession and the public are much indebted for his suggestion of this valuable addition to the materia medica,) observes, cure rheumatism, without reducing the vital powers. He has most satisfactorily ascertained that the medicinal virtues of the colchicum are not confined to the root, but that they exist in the seed of the plant, the salutary qualities of which, in subduing painful diseases, *unconnected with gout or inflammation, especially of the viscera*, he states, are scarcely to be imagined by those who have witnessed the capricious and often violent, and even fatal effects of a concentrated infusion or tincture of the root. Hence Mr. Haden's cautionary observations do not apply to the seeds of the plant. It is, however, only in cases of acute rheumatism and gout, in a good constitution, that either the wine of the seeds, or any preparation of the root should be employed uncombined with some tonic. In chronic rheumatism, either of them ought to be conjoined, with such remedies which the state of

the general health may indicate. It is often useful to give cinchona at the same time ; and sometimes the compound powder of ipecacuanha at night. There are cases wherein neither remedy employed will be beneficial, that will be immediately relieved by the combination above-mentioned. Adults usually begin with taking twenty drops of the wine of colchicum seed, three times a day, and gradually increase it to fifty or sixty, without any unpleasant effects on the stomach or bowels. In cases of gout of elderly people, or occurring in a weak or impaired constitution, more especially when the viscera are occasionally attacked, even the wine of the seeds must be administered with a tonic medicine, as the compound tincture of rhatary root, peruvian bark, by which means the tone and functions of the digestive organs, will be supported or restored, the nervous system tranquillized, at the same time invigorated, and these objects being accomplished, the muscular strength will not only be maintained, but improved. Potent medicines are the most valuable we possess ; and their injurious effects are ever the consequence of *injudicious* exhibition. Even the most innocent medicine, by abuse, may be productive of mischief. Rheumatism has been not only very prevalent, particularly within the last few months, but seems to be on the increase, while the other more formidable and fatal epidemic of Britain, true consumption of the lungs, is on the contrary, decreasing. Those affections which implicate the pulmonary organs appear to be more of a general than of a specific kind, and the disorder that is now systematically denominated bronchitis, (inflammation of the mucous membrane of the air-passages,) and which used to be termed spurious peripneumony, excites observation in a much greater degree than does genuine phthisis. This disorder, bronchitis, is sometimes apparently so slight as to resemble only a violent catarrh, which misleads the unexperienced, and by neglect, degenerates into one spe-

cies of consumption, either by causing a wasting secretion of purulent matter from the membrane, first and chiefly affected, or by such affection expanding itself into, and ultimately consuming the substance of the body of the lungs. Authors generally regarding bronchitis as merely a milder species of peripneumonia vera, or true pneumonic inflammation, and requiring, especially when acute, somewhat of a similar treatment, did not think it necessary to notice it under a distinct head, nor did they sufficiently recognize its stages; but Dr. Badham, in a treatise published by him, displaying much pathological philosophy, has very justly looked upon it as deserving of a separate investigation, and Dr. Hastings, more recently, has copied his example. But Dr. Hastings, without bringing forward a single new fact upon the subject has extended his notions beyond every legitimate inference. Of the acute species of the disease, he enumerates seven varieties; and of the chronic kind, six !! (According to the Doctor's plan) it would have been easy to increase them to twice the number. In truth, he not only brings in other diseases for his varieties, but he mistakes the *different stages* of inflammation of the mucous membrane of the bronchia, for *different species*; because the characteristic symptoms of this supposed *acute* species, are evidently those of the *first* stage; and those of his *chronic* species, those of the *advanced* stage. The Doctor's treatment of bronchitis appears to me no less curious and inconsistent than his divisions; the one is generally vague and inert, the other, destitute of practical utility. Of the *acute varieties*, he says, "Moderate the excitement of the
 "sanguiferous system, by general blood-letting, acidulated
 "mucilagenous drinks, and abstinence from all stimula-
 "ting food; promote expectoration and perspiration, by
 "antimonial and saline medicines; *direct the fluids to-*
 "wards the surface, and relieve the congestion of the
 "*debilitated* capillaries, by local blood-letting, blisters,

“and rubifacients!” The *chronic varieties*.—“The treatment should be chiefly directed to remove *inflammation*” (debilitated capillaries agreeably to the Doctor’s theory) “of the mucous membrane. The means employed for this purpose are various : some,” the Doctor says, “act by *directly enfeebling* the *force* of the circulation. Some moderate excitement, by *re-establishing* the *secretions* throughout the system.”!! “Others act “in parts in the neighbourhood of *that which is diseased*, “and a *few* are *directly* applied to the inflamed membrane.”!! So much for the Doctor’s medical logic, who has been more zealous in stringing words together, than successful in advancing medical science with any thing new. In the treatment of this disease, the greatest attention is necessary, not only as to the state of the patient’s general health, but as to the particular complexion and character of the disorder. In an inflammatory, or excitable system, the advanced stage is accompanied with *acute* symptoms ; and in an opposite condition, the first stage has frequently a chronic character. Should advice be applied for at an early period of the disease, and there be great difficulty of breathing, with much pain, bleeding must be resorted to, in order to facilitate the circulation of the blood through the lungs, and during the whole course of the disease an antiphlogistic regimen will be most proper ; but where these symptoms do not prevail, we need not have recourse to the lancet, more especially if the attack be in elderly people, and such as are of a phlegmatic or scrofulous habit, for much harm may be done by inducing a considerable degree of weakness unnecessarily. In chronic coughs, arising from continued irritation of the bronchial membrane, the copaiba balsam has been of late deservedly celebrated, but I think some have said too much in praise of it. External irritants together with internal tonics frequently prove, in these disorders, amply serviceable, and the ointment of

tartrate of antimony with opium will sometimes effect the removal of the internal irritation to the external surface. These, or blisters may be used in any stage of chronic bronchitis, and in many cases in which blood-letting cannot be carried far enough, or cannot be employed at all, they prove very beneficial; but external applications, in order to correct internal derangements, are not, at the present time sufficiently appreciated, and it would perhaps be considered inconsistent to talk of giving an outlet to foul humours by the opening of issues and setons. These topical excitants, however, frequently prove extremely useful in diverting diseased action from vital parts. Affections of the lungs, may, very frequently, be checked by employing in due time these topical remedies; and those very disorders which more immediately implicate the stomach and first passages, are sometimes influenced by them in a very particular way. When the system is much emaciated or debilitated, either by winter cough or asthma, and during an advanced stage of bronchitis, the cascarilla bark applies itself to the demands of these cases, inasmuch as with a tonic it combines an expectorant virtue, while the cinchona bark, although it most commonly strengthens, yet it sometimes *locks up* locally, and is therefore inadmissible. In these cases of emaciation, the decoction of cocoa-nuts ground with a small proportion of Iceland moss, with an addition of sugar and milk, has been found an excellent article of diet, more particularly for breakfast and supper. See a "Treatise on the Antiphthisical Properties of the Iceland Moss, under the name of Catarrhal, or Membranous Phthisis." In pulmonary and other thoracic phlegmasiæ, as the pleura, &c., nothing appears to relieve so effectually the slight degree of inflammation that commonly remains for some time after an acute and severe attack, as exciting the mucous membrane of the lungs by squills, ipecacuanha, &c., and the production of a rash on the surface of

the chest as before mentioned ; but in chronic bronchitis, with respect to that class of medicines named expectorants, the young practitioner ought to be particularly cautious not to employ them too freely or too often, as they are frequently found by their specific influence upon the membrane more particularly disordered, to keep up and even to increase that very irritation which it is the intention of medicine to put down and subdue. For this latter purpose, very efficacious effects, in cases of asthma, winter cough, and incipient consumption, have been obtained from the ligneous syrup of the colchicum seeds.

In almost every age names have influenced or governed the world. There are three words, viz. *debility*, *typhus*, and *physician*, each of which, by making a wrong impression on the minds of mankind, has destroyed the lives of thousands of human beings, and the reason why this has been, and still continues to be, it is at least one of the principal intents of the following pages to explain ; for an æra has at length arrived in the history of physic, when vague conjectures, which practical experience does not support, may, like the evanescent flash of a meteor, dazzle for a day, but must give place to the legitimate inferences of cool unbiassed observation. To the subject of debilitated capillaries, being either the cause or nature of fever and inflammation, as asserted by Doctors W. Philip and Hastings, I shall now merely add, that, at page 32, 33, &c. of the latter's treatise, their views of the pulsation of the two carotids and action of the heart, must be, according to the opinion of every practitioner of observation and experience, quite erroneous, and I am confident that their arguments cannot possibly be maintained at the bedside of the patient. They take *appearances* for *realities*. Dr. Hastings is also under a mistake respecting the operation of the arteries in case of whitlow at the end of the finger, and when the Doctor, who is a very young practitioner, becomes better acquainted with the

practical knowledge of the human body, and the mind less under the influence of the dazzling rays of experimental theorizing, I am assured he will change his system.

On the epithet experimental we may indeed observe, that for every practical and extensive improvement in medicine, there certainly ought to be a proportionate levy on the public. But for hypothetical writers, however ingenious, even although they had poured light on many branches of medical science, no such recompence can be claimed ; because it might perhaps hereafter be perverted to the fostering specious and seductive generalization, as well as to those practical discoveries which were the fruit of the justest and happiest conceptions. We cannot, however, censure any attempt to enlarge the bounds of human knowledge by experimental inquiry. The parts observed may not be at first sight, striking ; they may be deficient in beauty, and even destitute of evident utility ; they must however be considered valuable. They may for a time not be respected in the magazine of science, they may at last however be drawn forth to build up some corner of a theory, or to dispel the darkness of some difficult questions. But it is by no means uncommon even in medical writings, particularly such as record cases, to magnify and extol theory for facts. All practice, however, which is not modified by the perpetual exercise of the reasoning faculty, is inevitably empirical, and those men who are disposed to reason, the more minute and extensive they will become in their observations. It is for want of the more general diffusion of a similar spirit of investigation, that so large a proportion of medical men content themselves with certain vague ideas of the nature of diseases and the virtues of medicines, frequently quite remote from philosophical accuracy, and scarcely in any one instance exactly conformable to it. Hence it is so common for the half-instructed practitioner to begin his career with a groundless confidence, and to end it in

an equally unreasonable scepticism. But the intelligent and reflecting mind is in perpetual progress. We should therefore be contented with nothing that we have acquired, while so much still remains unattained. If ardent in the pursuit of knowledge, it will be no wonder that in our views of any subject we investigate, they are daily extended, and that new lights are constantly pouring in upon our minds. Darkness is withdrawn, and by these new lights our previous conceptions are, of course, modified and improved.

To return, however, to Dr. W. Philip and Dr. Hastings, I commend the diligence displayed by them in their physiological enquiries, but we are to recollect, that experiments made on brute animals are not by any means equal to knowledge acquired by attentive practical observation of the inherent processes of the living human frame, and I cannot help expressing my surprise that their practical knowledge should be so small on the important influence which the nervous system has in the development of fever and inflammation. The animal caloric or heat should be considered one of the great media of connection between the nervous and the sanguiferous systems; and therefore an attention to this circumstance will greatly contribute to illustrate many of the phenomena of diseases, and many of the operations of remedies. But to answer one fourth of their incongruities would be a waste of time and paper. Dr. Hastings asks if any one will be "bold enough to assert, that the influence of the heart produces some of the phenomena of local congestion and motion?" Or if "That difference in the pulsation of the two carotids, in the instance alluded to, (page 32) arose from the increased action of the heart?" I have the boldness to assert, that what has already been termed increased action or motion in the arteries of a particular part, is actually a state of those vessels very distinct from increased action; as the action of one artery cannot be

increased more than that of another independent of the heart ; and what appears to be so, is obstruction and distension, increased by the natural or preternatural action of the heart. Should any local disorder finally be so great as to augment the action of the heart by producing a nervous irritation, other organs having been previously predisposed are liable to become disordered by that augmentation of action, in which the whole arterial circle participates. Therefore in chronic as well as in acute disorders, the heart is directly and indirectly interested in their beginning or course ; and much of what is called sympathy may be traced to an express disturbance of the heart from some constitutional concussion, or to an indirect disturbance from some topical disorder. In both acute and chronic disorders, the influence of the nerves on the heart is not sufficiently attended to.

I have now also to remark on Dr. Parry's disregard of the nervous system, and to his assigning it only a subordinate influence in the production of diseases. He exalts the sanguiferous system as all in all, a doctrine in which I cannot concur ; for I am satisfied that, though the nervous and circulating organs are, as to their innate powers, independent of each other, they are nevertheless united in the most intimate relation, and exert a reciprocal influence the most allied. The nascent movements of all maladies, I conceive, depend upon the sentient system ; and that, in inflammation even, (the least doubtful instance of sanguineous momentum,) the first excitation, or disordered impression, is ever exerted upon the nerves of the part, and it is only consecutively that determination of blood follows. In other words, first a determination of nervous fluid, and then of blood.

In inflammation, the nerves are primitively thrown into morbid irritation, and these, instantaneously stirring up the arteries, pain, increased heat, redness, and tumefaction, are the chain of symptoms and appearances

commonly produced. This concatenation of actions and phenomena, is beautifully illustrated and satisfactorily proved in acute ophthalmia; where we have *first pain*, arising from nervous action; whether occasioned by cold air or any foreign body getting between the lid of the eye and the ball. *Secondly*, this pain is succeeded immediately by an *increase of heat*, arising also from nervous action; while this in its turn is followed by *redness* consequent on arterial dilatation. No swelling of any consequence will here occur, unless the disorder becomes most severe. The succession of these symptoms is likewise manifest from the sting of a wasp, puncture of a sharp instrument, or scald by boiling water. They are fully and equally elucidated in every acute inflammatory disorder. Though heat is here made to succeed pain, for certainly there is no pain in animals without a particular sensation of heat, yet I am fully persuaded, that, in very slight degrees of inflammation, the sensation of heat is first felt, as takes place in the commencement of ophthalmia, &c.; but in this case inflammation is not perfectly instituted, it rather resembles an increased healthy action.

It is likewise proved, by healthy action, that the nerves are first influenced, because no operation, however simple, is performed without the nerves beginning the series. The sun hardeneth the clay; also softeneth the wax. As it is one sun that worketh both, even so it is the nerves that will contraries. The nerves commence the series of both healthy and disordered action. Secretion is likewise regulated by the nerves, and this indeed is perhaps more than any other organic process, under their direct influence.

It is easily proved by a person pricking his skin, that *increase of heat* not only follows the pain, but precedes the redness, and that he will immediately feel after inflicting the pain a peculiar sensation of warmth. If a violent blow or wound be received, there is at the moment of the injury,

a thrilling pain, and very great sensation of heat. No doubt *heat* depends more on the nerves than the arteries.

Redness in inflammation depends on the arteries, carrying the red blood, becoming enlarged in their calibre, and holding more, as well as on those which have been conducting pale blood or lymph, becoming also enlarged, and transmitting coloured blood. The capillaries, and inosculating or communicating vessels between the arteries and veins, and even the commencement of the veins themselves, must be equally dilated. It is hardly possible to imagine that this effect could take place, unless the nerves were first affected, and if this be allowed to be the order in which these phenomena occur, then it is easy to account for the swelling. The increase of blood, which denotes the redness, will occasion a tumefaction. A greater swelling however frequently succeeds than this mere increase of blood can produce, which appears to arise from coagulable lymph being deposited.

The first and most important circumstance which engaged my attention in this sketch, is the *morbid action* of the *nerves*, indicated by *pain*.

This symptom should, therefore, be most attentively considered ; for whatever can possibly tend to subdue or arrest the action productive of the sensation of pain, ought to be employed. The consideration of this symptom, as the principal one, is fully authorised, by pain being our paramount diagnostic in inflammatory complaints ; as, for instance, phrenitis, ophthalmia, pneumonia, enteritis, &c. I am indeed of opinion, that all other symptoms in such disorders are of minor importance to that of pain ; it should be our principal guide. Hence the remedies which I have found most conducive in abating pain are blood-letting, warm* anodyne fomentations, or cold ap-

* Heat subdues *pain*, by subduing its cause, i. e. by restoring the nerves directly concerned in producing it, to a proper state.

plications as circumstances may require, alvine evacuations, and narcotics.

Blood-letting obviously subdues the sensation or feeling called *pain*, by reducing or arresting its cause, which is generally inflammation, always primary a morbid action of the nerves.

Bleeding diminishes the quantity of blood flowing to the brain, and thereby reduces the stimulus to this organ and the nerves; and, also, by lessening the quantity flowing in the arteries and veins, of course takes off the pressure on the nerves which are morbidly excited. It must therefore be the most powerful and effective remedy. Thus, in inflammation of the great organs or cavities, general bleeding is especially applicable.

Having concisely detailed the remedies which subdue pain; and as this symptom principally arises from morbidly excited nerves, which influence the other vessels concerned in inflammation, it of course follows, that the other symptoms must be benefited by the treatment already stated. The *heat* enumerated as the second phenomenon, will be reduced, first, by the bleeding; secondly, by the warm anodyne fomentations, and lastly, by the narcotics, for heat (as will afterwards be still further proved) is generated by nervous excitement. When the inflammatory action is so severe as to affect the general system, or when an important organ is the subject of disorder; cooling cathartics should be administered, and the patient put on a low diet and diluent drinks.

The *redness* being consequent on increased arterial dilatation, will also be rendered paler by nervous excitement being reduced, because I have sufficiently proved that arterial distension and redness depend on nervous influence, and not on "capillary debility". The arteries however having been over-distended by the super-action of nerves, and by the subsequent relaxation, the redness will not disappear in a ratio to the pain and heat, as is

particularly exemplified in chronic ophthalmia. It is therefore sometimes necessary, after the acute inflammatory action has been subdued, to employ restorative means to recruit the sub-action and relaxed part to its vigour of health. This is best effected by discontinuing the warm relaxing applications, and using water colder and colder, but always applied for a short while at a time, recouring to friction when the part will admit of it, and employing a roller where it can be applied. When necessary, attention ought likewise to be directed to diet and exercise.

Tumefaction was the last mentioned phenomenon of inflammation. This happens only when inflammation has been particularly severe and of some continuance. The remedies which have been mentioned not only reduce but increase it; the bleeding, performed judiciously, will diminish it, while the warm relaxing applications, by favouring the effusion of coagulable lymph, will augment it. Hence this symptom will be more removed by the restorative than by the sedative means. Generally speaking it is a phenomenon of less consequence than the others, and on their violence its magnitude wholly depends.

In some local inflammations that occur in different textures of the body, as also in different constitutions, warm applications some time agree better than cold, and *vice versa*. In order to distinguish these, I have drawn up some practical observations, which will be inserted in another part of this work. I shall now, however, remark, that the general effect of an external application of any moist substance on an organ internally situated, depends on its temperature. If applied in a *cold* state to the skin, even of a part remote from a diseased viscus, it will frequently cause pain in it; but apply it *warm* and relief in the part will be produced. Every part of the nervous system is most extremely sensitive; so that when the natural tem-

perature of a part is *suddenly* reduced many degrees, by an application of cold water or by being exposed to cold air, pain or spasms will ensue in a diseased or preternaturally irritable organ. Therefore, if a person with tender or disordered bowels expose any part of the body to cold air, or even an extremity be dipped in cold water, spasms or diarrhoea, or perhaps both, will supervene. A person having a disordered or irritable bladder will instantly, on such practice, feel pain in that viscus; in like manner, a person whose nerves of the trachea are unusually exciteable, or subject to asthmatic paroxysms, will experience a fit of asthma; while in others, with irritable lungs, a cough would follow. These are effects of *general* impression on the nervous system; which must, of course, materially affect the part which is most excitable, or in which exists structural disease. It is the local abstraction of heat, or reduction of the temperature of a part, that operates injuriously on a disordered viscus; so that any substance which augments the temperature of the skin of a distant part, on the contrary, acts favourably on a diseased internal organ. By immersing the extremities in warm water, and by exciting inflammation of the skin, internal spasms and inflammation, are regularly relieved, whilst water applied cold almost uniformly provokes the internal disorder. In cases of accidents and active inflammation much mischief is often done by not regulating the temperature of fomentations. The application of the same degree of heat (say 120 Farenheit) to an inflamed or preternaturally irritable part, will aggravate the mischief, by increasing the determination to it, and promoting suppuration, where the object is to effect resolution; whilst that of cold, by diminishing nervous energy, affords relief. Fomenting with warm water at 97 degrees, continued only ten minutes, has been found highly beneficial, when immediately followed by an application of a *cold* lotion, particularly the common one, of

extract of lead (two drachms), soft water (one pint), and rectified spirit of wine (two ounces). The good effects of this treatment may be attributed to the warm vapour allaying the irritation of the nerves, and consequently the spasmodic affection of the muscular fibres, when the application of cold, or an evaporating lotion has a most powerful effect on the distended blood-vessels. In cases of inflammation of the eyes, and acute rheumatism, this practice has been found wonderfully beneficial. The structure of the conjunctive tunic of the eye is very similar to that of the membranes and ligaments of a joint, and when inflamed, may, in either case, be termed rheumatism, and are reducible on analogous principles. This leads me to observe, that if all the maladies which occur in the human frame were properly named, instead of the catalogue amounting to hundreds, it would scarcely exceed a dozen, or about as many as Dr. Hasting's prodigiously sagacious and prolific list contains of varieties of bronchitis. The practice of medicine might be in the same proportion, as in the reduction of names simplified. The doctrines of the metastasis (or translation) of disease, especially of rheumatism and gout, have induced experienced practitioners, in cases of internal inflammation, to adopt a treatment, with the view of driving it to the extremities, which has been productive of the most serious consequences. In cases of inflammation of the stomach or any other organ, it is assuredly advisable, by means of stimulants to the extremities, to produce a determination of nervous fluid and blood to them; but if stimulants be taken into the stomach, under the idea that the complaint requires the same treatment as when seated in a part of a different structure, or when it took place in the extremities, the patient's life will most probably fall a sacrifice to the practice. Much has been written on the supposed nature of rheumatism, and medical men generally are as much divided in their opinions on the

subject, as they were a hundred years ago. The effect of cold or damp air on the membranes and ligaments of joints, and on the membranous covering of muscles, is merely inflammatory excitement, by which I mean, as before mentioned, excitement of nerves, with a slight distension of blood-vessels, which never advance to suppuration; but in parts more vascular, active inflammation occurs, which will, if proper measures be not promptly employed run on to suppuration. As an adjunct to the foregoing treatment of local inflammation arising from accidents, &c., I have to observe, that if the inflammatory symptoms run high, bleeding, general or topical, or both, as the case may be, should be premised, and a bold and decisive practice adopted to prevent further mischief. A gentleman presumed, one day on going over the wards of St. Bartholomew's Hospital, with the late Sir James Erle, to ask him on what principle he recommended warm fomentation in a case of active inflammation. "The knight's answer," says the gentleman alluded to, "did not a little astonish me, viz. 'He knew no other reason, than because it generally proves beneficial'. I then enquired if it was not of some consequence that it should be applied at a certain temperature; to which he answered, 'The sister (the nurse of the ward) will see to that'." The gentleman agrees in opinion, that much injury is sometimes done by fomentations indiscriminately applied, and he adds, "a few weeks ago I found a nurse in a public hospital fomenting an inflamed part with flannels, wrung out of *boiling* water, and that too in a part where the extension of the inflammation or suppuration would endanger life. In cases of fractured bones and inflammation of joints, I have known fomentations by ignorant nurses, followed by extensive mischief. In some cases of inflammation of the eyes, although under the sanction of Sir William Adams, I have known it to aggravate the disease to a very serious

“extent. Some little time since, I met with as distress-
 “sing a case as ever occurred in surgery, which I attribute
 “solely to imprudent fomentation. The patient, in con-
 “sequence of a strain, was siezed with a violent pain about
 “the neck of the bladder. Fomentation was employed
 “three times a day, and notwithstanding that the distress
 “of the patient was increased, it was continued. At
 “length a tumour appeared, which evidently contained
 “matter. The fomentation was in consequence repeated
 “more frequently. The abcess presented in the perinæ-
 “um, &c. It broke in the rectum, the perinæum, groin,
 “and scrotum, and through each opening the urine esca-
 “ped !! Now had blood been extracted by leeches, or by
 “opening a vein, an evapourating lotion applied to the
 “part, and antiphlogistic remedies and regimen adopted,
 “would not the result have been very different?” My
 object in dwelling so long on fomentation is to point out
 the impropriety of increasing the afflux of blood to an
 inflamed part, with a view of dispersion, and to induce
 surgeons to give some directions as to the degree of heat
 that should be employed when it is proper. It has been
 fully acknowledged, especially by chiro-physicians, that
 the application of moisture at a particular temperature, has
 great efficacy in allaying pain and abating inflammation;
 but no means have hitherto been devised for the conti-
 nued use of this remedy. An apparatus, however, for
 this purpose has been lately contrived by a physician of
 Dublin, which seems likely to produce the most beneficial
 effects, even in recent wounds of the worst kind. In a
 case of punctured and lacerated wounds, in which the
 palmar fascia was penetrated and partially torn out, the
 hand was placed in a vapour of water at 97 degrees Fa-
 renheit, *instantly* on receiving the injury, and kept in it
 for 12 hours without intermission. All pain and inflam-
 mation by these means were prevented. Lint, wet with
 water, was afterwards applied; the wounds very soon

healed without suppuration ; the surface closed gradually, instead of filling up with granulations, and the cicatrices left are of the very best sort. In order that the beneficial effects of fomentation, manifestly arising from the application of the warm vapour, in cases of *indolent* tumours and effusion of blood, should range between 120 to 140, never exceeding the latter.

I may here remark, that the *operation of blood-letting*, being too often performed by unskilful practitioners, it is regarded by the public as trivial with respect to its execution. Hence not only some surgeons but most physicians are *forced*, from the magical influence of popular prejudice, fashion, and etiquette, however erroneous, to consider it derogating from their dignity to bleed their patients, and thus the operation as well as the quantity of blood to be drawn, are frequently left in the hands of the ignorant. However, whether we consider the powers of blood-letting on the system, or the exact niceness of the mode requisite for effecting it, its importance must be deemed at least equal to any operation in surgery ; and hence many skilful surgeons have an insuperable dislike to it ; while the person ignorant not only of the great nicety, steadiness, and exactness, but its effects on the constitution, performs it without the least reflection of danger, though by no means with uniform success ; as is proved by the melancholy cases that are daily admitted into some one or other of our hospitals in consequence of the ignorance of such operators, either by wounding a tendon or puncturing an artery. An able medical writer says, “a blacksmith, in Herefordshire, who had obtained “great celebrity as a bleeder, was requested by his wife “to take a little blood from her arm on account of some “slight indisposition. The lancet having unfortunately “penetrated the brachial artery, and his usual means of “stopping the flow of blood failing, he had recourse to “pressing over the orifice cobwebs and lint with such

“force, that a considerable portion entered the wound. “The blood still continuing to ooze out, and the arm being considerably swollen, he sent her to the Hereford Infirmary; but the inflammation having extended to the chest, and mortification commenced, amputation was rendered impracticable, and the poor woman died the following day.” Dr. Gratton of Dublin, and many other able practitioners, mention having seen instances of the like nature, and some time ago I witnessed a similar one in a poor man who had been bled in the arm by a woman, who nearly divided the vein. No medical assistance was called until several days had elapsed, when gangrene had extended to the chest, and in less than two days afterwards he died.

I could now mention a case that very recently occurred, not two miles from this city, and which I am sorry to say, if my information be correct, proved fatal to a most praiseworthy character, owing to the want of skill and judgment of the medical men who attended him. I shall, however, hereafter take an opportunity of enlarging upon this subject. I shall now beg leave to relate a case which happened some time since, and in which I was principally concerned. Mrs. E. of High-street, in this city, being severely attacked with inflammation of the lungs, I was obliged to repeat blood-letting several times before the disease could be subdued. Inflammation in the arm at last ensued, which, by increasing the general irritation of the body, threatened serious consequences; but by taking into consideration, at one and the same time, the rise and progress of both local and constitutional symptoms, and watching them carefully, I was enabled to restrain them from producing fatal effects, which in all probability would have been the case had they been regarded or treated as two distinct diseases, or placed under the management of different classes of medical men. This was a case which is technically termed mixed or

compound, and according to the usual custom there would have been a surgeon sent for to treat the external disease, and a physician to treat the constitutional derangement, in consequence of which, I stated to the patient and her friends, that so far as my own inclination led me, I had no objection to perform any operation; having been accustomed so to do, but still it was a matter of difficulty to contend against popular prejudice, and that however successful I might be in the operation, I should get no credit by it, because it would be represented as if I had stepped out of the physician's department, as it is called, or if any untoward circumstance should ensue either from the local or constitutional affection, it would be misrepresented in many and various ways much to my disadvantage. Suppuration, however having taken place in the arm, I made an incision, at the proper period, into the integuments, soon after which every symptom terminated favourably, and the patient is now in perfect health. And I am assured were the same plan and principles, of patiently investigating, and narrowly observing, the origin, progress, and connection of diseases, pursued by the faculty generally, the lives of hundreds and thousands of our fellow-creatures would be saved. It may indeed be laid down as a maxim, that any treatment which is not capable of arresting the progress of a disease at its onset, must necessarily be productive of the most serious consequences, inasmuch as the patient by trusting to it, loses an opportunity of receiving a cure by judicious and active measures, never to be recalled; and thus is a sacrifice made of life by placing confidence in the promises of those who hold out the necessity of having different classes of medical men, which division has led the attention of such practitioners to be too exclusively directed to those diseases, which custom has arbitrarily allotted to their care. Hence in this civilized country a man is prevented from exercising the most important

duty of christianity! and for which no rational reason can be assigned. As to *consultations* that may be necessary I shall never object to, but I do assert, that to make this mode of practice beneficial to mankind, which is my great aim, every medical man ought to have a knowledge of diseases acquired by actual experience as they really appear in all their several stages, and be competent to combine their different symptoms, whether simple or complex; for without which, consultations will remain a mere system of mockery and delusion.

The experienced author of "Observations on Surgery," relates a case of wounded brachial artery, which may be useful both as a caution to young practitioners, in the art of bleeding, and an instructive lesson in the event of their injuring the subjacent artery. "Thomas Mellifont, a "seaman of the York, 74, on the 16th of March, 1813, "was attacked with incipient symptoms of pneumonia, "for which the surgeon of the ship directed him to be "bled. The assistant who performed the operation, "owing to a pitch of the ship, then under sail, slit open "the brachial artery more than a quarter of an inch in an "oblique direction. The hæmorrhage was suppressed "by a thick compress and roller until the 17th, when the "patient was placed under my care.

"On the bandage and compress being removed, the "blood gushed out in a *saltus*, and in larger volume than "I supposed it possibly could have issued from the artery, "if the vessel had been completely divided in a transverse "direction. Pressure was therefore made upon the ar- "tery near the axilla, so as to stop the circulation in the "vessel below, when I made an incision two inches in "length over the punctures and in the direction of the "vessel, until, by gentle scratches of the scalpel, the punc- "tured part of the artery was reached; before we could "clearly see the aperture made into the artery, however, "three small branches were tied, which bled freely and

“obscured our view. A probe was now passed through
 “the opening into the canal of the artery upwards, which
 “enabled us to divide the vessel completely at this part,
 “to raise the divided upper end into which the probe had
 “been introduced, and to detach it a little way from the
 “great cardiac nerve and its cellular connections, until
 “we could lay hold of it with a pair of artery forceps, by
 “which it was drawn downwards, and the artery firmly
 “tied with a ligature, in the same manner as in an am-
 “putated stump. In detaching the lower divided end of
 “the artery with the probe introduced, a few fibres of
 “the tendon of the biceps were necessarily divided, and
 “a ligature was in like manner applied here.

“The wound was cleared of blood, and the sides were
 “brought together by slips of sticking-plaister. The
 “ligatures came away in a few days, the wound very soon
 “cicatrized, and left the patient in as full possession of
 “the use of his arm, as if no such accident had occurred,
 “and he was discharged to his duty.”

The morbid results sometimes following blood-letting,
 are, first, *inflammation of the integuments*, which will be
 either phlegmonous or erysipelatous, according as par-
 ticular constitutional or local circumstances may chance
 to be present. The symptoms or cure are analogous to
 those of inflammation in general.

Second, *inflammation of the vein*; the symptoms of
 which are swelling of the vein, and which becomes capa-
 ble of being distinctly traced in its course along the limb,
 by an unusual hardness to the feel, and by an erysipela-
 tous inflammation which runs over it. Much pain, red-
 ness, and stiffness of the arm is occasioned. Suppuration
 frequently shortly ensues; most violent rigors come on,
 accompanied with much sympathetic fever, not merely
 from the excitement, which inflammation generally pro-
 duces, but likewise in consequence of the irritation con-
 tinued along the membraneous lining of the vein to the

heart. Sometimes, however, the inflammation extends only downwards towards the wrist. It has proved fatal, from the admixture of pus with the circulating fluids.

The *treatment* is to obviate the extension of the inflammation along the course of the vessel, by placing a compress tightly over the vein, at a small distance above the punctured part, in order to effect adhesion between its sides. Should this be ineffectual, a complete division of the venal tube is advised. Fomentation and other local remedies, which other inflammations require, should be assiduously employed. To prevent the pus from becoming mixed with the circulation, a ligature may be passed round the suppurating vein, above the affected part of the vessel.

Third, *inflammation of the absorbents*; the symptoms produced by which are, unusual pain, coming on soon after the infliction of the wound, succeeded by a red inflamed line, chord-like to the feel, and very painful about the middle of the arm, and on the fore-arm, about the mid-space, extending often both upwards and downwards, along the member, which in a short time begins to swell, and an extensive inflammation takes place; numerous abscesses, sometimes as large as an egg, frequently form in the course of the absorbents, and in general the nearest gland becomes enlarged, great constitutional irritation ensues, the pulse is extremely quick and hard; delirium, and in some instances death, has followed.

The *treatment* should consist of leeches applied along the course of the inflamed absorbent; the administration of cathartics, refrigerants, the saline medicine, and other remedies proper for inflammation;—cooling saturnine lotions ought to be first applied to the part, but should these be unsuccessful, emollient poultices and hot fomentations.

Fourth, *inflammation of the subjacent fascia*; which is

attended with considerable pain in the part, frequently extending upwards to the acromion of the scapula, and into the axilla, no particular swelling, however, being perceptible in either direction: the fore-arm and fingers become stiff and cannot be extended without great pain. At first there is little tumour; in about a week a considerable tumefaction takes place with erysipelatous inflammation, attended with some fever, and occasionally large collections of matter from beneath the fascia.

The *treatment* of an inflamed fascia requires refrigerant lotions; fomentations; emollient cataplasms, and other topical remedies adapted to the species and the stage of inflammation. If suppuration ensue, and matter collect beneath the fascia, this should be immediately divided by an incision. As soon as the violence of the symptoms has subsided, frequent motions of the arm and fingers should be adopted to prevent consequent contraction and rigidity.

Fifth, *wounded nerve*.—Distracting pain is sometimes felt immediately upon the introduction of the instrument, and this speedily followed by the most extreme constitutional irritation,—delirium,—convulsions,—tetanus. At others, a considerable period elapses before the accession of the symptoms.

In the *treatment* it is advised to divide the nerve, and thereby intercept the communication with the sensorium. It is possible, however, that the injured nerve may be inflamed, and in this case even a total division of it, at the affected part, would, perhaps, fail in relieving the general nervous irritation, which the disease has occasioned. As the inflammation of a nerve has lately been ascertained to extend an inch and sometimes one and a half from the point of injury, the division should always be made fully at that distance, if possible, above the original wound. To a defect of knowledge in this particular circumstance many failures, in the success of dividing injured nerves,

may, I think be attributed. If bleeding has been performed in the median basilic vein, a division of the internal cutaneous nerve will be required: if the median cephalic, the external. They lie directly above the fascia of the fore-arm, and by a careful dissection are easily discovered.

Sixth, *varicose aneurism*.—In the preceding account, the various ill consequences occasionally arising, after venesection, are represented separately; though in some instances they may occur together. The most common however is a thrombus, or ecchymosis, a small tumour around the orifice, and produced by the blood insinuating itself into the adjoining cellular substance, at the time when the fluid is flowing out of the vessel. The best application for promoting the absorption of these tumours, are those containing spirit, vinegar, and muriate of ammonia.

The disagreeable circumstances which too frequently occur during this operation, as well as the effects of the loss of blood on different constitutions, and on the same constitution at different periods, must clearly point out to us that it should always be performed by, or at least with the consent of a medical practitioner of experience and skill; because, as an old physician judiciously observes, “it is taking away what medicine cannot give.” In internal bruises, occasioned by severe falls, it may be absolutely necessary that the patient should immediately be bled; when, therefore, the aid of a surgeon cannot be readily obtained, the advantage that would result from the immediate extraction of blood might, in general more than counterbalance any slight mischief that may take place from the operation not being ably performed. In sudden attacks of apoplexy, inflammation of the lungs, pleurisy, and all internal inflammations and inflammatory fevers, accompanied with determination of blood to the head or lungs, the early loss of blood is generally of great importance; but as the topical extraction may prove

more beneficial than general bleeding, and as the quantity to be taken away must be regulated according to various circumstances, even in such cases it will be advisable to defer it till the arrival of the practitioner, which should be as speedy as possible, not to exceed six or eight hours. But it will be sufficiently evident, from the foregoing and following observations, that the before-mentioned cases are the main ones in which the unexperienced should venture to make free with the abstraction of the vital fluid. Disease is by nature so diversified, and the various stages of even the same disease require such different management, that the experienced chiro-physician* only can appreciate the extent of the difficulty of discriminating the proper remedies. True it is, that to recognize and determine the real character of a disease, amidst the tumultuous concourse of so many phenomena ; to sieze and apply with precision the proper remedy, and to measure it always exactly on the scale of the vital powers, the difficulty is by no means inconsiderable ; and it is painful to admit, that the progress of fever, inflammations, &c., are often so obscure and insidious, that the most able physician finds himself occasionally constrained to rest upon mere probabilities, and to proceed frequently at hazard in the midst of darkness. Dr. J. Von Rotterdam, Clinical Professor of Therapeutics, &c., in the School of Medicine at Ghent, says, “I freely avow, that after having “treated some hundreds of those diseases, I have found myself more than once embarrassed, and not knowing what “part to take. How is it then,” he asks, “with a novice “in the healing art, an empirical practitioner, unacquainted with the first rudiments ?” It appears from this that England is not the only country in which this *potent* and *triumphant instrument*, the *lancet*, may prove fatal in the hands of the ignorant. There certainly can be no phy-

* A physician practically acquainted with surgery ; of which hereafter :

sician or surgeon in much practice, but must have had the mortification to see frequent instances of the abuse of the lancet, either in the operation or in the abstraction of blood at an improper time, so that every means have failed that art could devise to restore the accustomed tone to an exhausted system ; or, on the contrary, that some organization of the viscera, and death have ensued from the necessarily large quantity of blood not being taken away at the proper period.

But to return to fever, the fact being that this disease and inflammation are nearly allied, and that the former is very frequently productive of the latter, is of vast practical importance, as we understand more fully how to treat inflammatory disorders than many other parts of medical practice. And the fact to which I have just alluded must be admitted by every person who is possessed of competent knowledge. Fever only becomes dangerous when it gives rise to, or displays, the symptoms of visceral inflammation.

The deviations from health which take place, forming disease, may be distinguished into two principal classes, the *general* and *local*, as they either affect the whole body, or occur in one part. But these technical divisions, of general and local, we must never forget, mutually influence each other.

Of the *general diseases*, the first order is that of augmented caloric or heat, which admits of many divisions.

Of these diseases the most simple is *inflammatory fever*. The blood being super-oxygenated, and the electric or galvanic energies of the brain being moreover increased, an excess of caloric is naturally produced. The heart's action being in consequence quickened, the blood of course is propelled through the vessels of the brain with greater force, and the disturbed state of this organ is thereby kept up. As the skin becomes dry, heat will continue to accumulate from the want of a conducting surface. From the

great excess of heat, the functions of all the organs become disturbed, and the secretions of course more or less morbid; producing nausea and squeamishness of stomach, urine high coloured, and the fæces offensive and dark coloured. During this condition, if one part of the body be more irritable than another, some mischief may ensue, more especially should it continue two or three days, such as inflammation of some of the principal organs. It is highly probable that this accumulation of caloric, will have great influence on the state of the fluids. Coagulation of lymph may be the natural effect of caloric when applied out of the body, and if so, it may be reasonable to presume that the application of the same power will likewise affect them in the body, though not to the same extent. Having instituted a series of experiments, I shall be able in a future part of this work, to speak more pointedly on this matter. Blood taken away in inflammatory fever assuredly has a greater consistence, and exhibits more of the sizzly coat, than in health. Its having a greater density is, however, with medical men, still a disputed point, as will hereafter be seen.

In the milder form then of simple fever, there is at first often no certain proof of any local inflammation. But even under these circumstances, blood, when drawn, frequently exhibits the inflammatory crust; the state of the secretions resembles the condition they assume in the phlegmasiæ; the relief which is likewise afforded by venesection, and by other evacuations, tends only to prove that the disorder is in its nature analogous to these maladies. The milder species, however, is always liable to be converted into a more severe fever, which will exhibit both in the living and the dead body, undoubted marks of inflammation not only of the brain, but of the lungs, the liver, stomach or bowels. Simple fever frequently and most naturally degenerates into cephalic: the cases indeed to which these terms are applied, are distinguished

merely by the different violence in the symptoms in both cases ; the head is ever more or less affected with pains and other disorders. In the more severe form, the seat of these appear to be the membranes of the brain ; and to the same part, as well as to the coverings of the nerves, we may attribute the pains in the head and limbs which ever accompany the first attack of nearly every case of fever. We may therefore consider simple and cephalic or brain-fever as the genuine forms of this disease, the attack being milder in the first, and more violent in the second. The pneumatic, hepatic, gastric, enteric, (i. e. of the lungs, liver, stomach, intestines,) and rheumatic, forms may be regarded as varieties. With regard to pain in the loins and back, pains in the limbs, or that general feeling of soreness, of which patients almost universally complain, there appears to prevail among medical men some error in judging of this particular. Some have fallaciously referred these symptoms to a morbid state of the sensorium, and especially to a depravity of the sense of touch, while others consider them chiefly owing to the diseased condition of the parts themselves, probably, they think, to over-activity of their blood-vessels, as they have frequently seen these feelings remarkably relieved by withdrawing a quantity of blood, often during the time it was flowing from the vein. My own opinion is, that these pains or feeling of soreness depends more on increased excitement of the nerves than the condition of the blood-vessels, and that the morbid state of the blood-vessels is the consequence of the nervous excitement. As the blood-vessels are at this time probably over-distended, which greatly tends to keep up the morbid excitement of the nervous system, the soreness is relieved by abstracting a quantity of blood.

So complicated and minute, however, is the human machine, in structure and functions ; so intricate its movements, and so numerous the agents by which it is

influenced, from within and from without, that the science of health and disease very greatly exceeds almost all the other sciences in acquirement and difficulty. Great mischief must then of course be expected from the rude hands of ignorant pretenders. True it is, any man merely of very ordinary capacity may soon acquire the names, the doses, and indeed the qualities of the whole *materia medica*, and be able to tell nearly how each will act upon the living machine, *in a state of health*. But the great and most important difficulty is to find out not only the nature and seat of the *disease*, but how to remove it by remedies, which often occasion direct opposite effects. Nor is it by *seeing* a great deal of sickness *only*, but by closely *studying* and examining what we do see, that this knowledge can be attained. Hence the salutary *modus operandi*, or action upon the human body, of the other important remedies, (*besides blood-letting*,) employed in the cure of fever, inflammation, &c., will also be noticed; such as cathartics, cold and warm affusion, emetics, diaphoretics, tonics and stimulants, including cinchona (or peruvian bark) wine, opium, &c.; with the *rationale* of *mercury*, which, after all, is by many not clearly understood, even by those who write favourably of it, in equalizing the circulation, and thus proving, when administered with judgment in the *compatible* stage of the disease, one of the most powerful febrifuges which we possess; together with the minor or subordinate remedies, as blisters, sinapisms, &c., the operation of which, if their application be properly *timed*, is obviously to restore the balance of the circulation and excitability by soliciting artificial determinations, not of blood only, as many physicians suppose, but of nervous excitement, or of nervous fluid, to superficial parts, with the view of relieving internal congestions or inflammations.

The two principal agents, atmospheric vicissitudes and irregular modes of diet, in *causing* congestive and inflam-

matory complaints, both acute and chronic, will, together with the *preventive checks* to disease, be plainly elucidated; as indeed will be most part of the work, so far as technical terms will admit, of which a *glossary* will be given, for the greater benefit of non-medical or general readers.

Certainly then we are in the possession of the means of depressing and invigorating the vital powers; of alleviating pain and morbid irritation; of lessening and increasing the action of the heart, and diminishing the quantity of blood; of rousing the operation of the absorbent system; of augmenting the secretions of the different viscera, as the liver, kidneys, &c.; of eliciting perspiration; of relaxing and constringing the muscular system; and of depleting the stomach and intestines. In order however to employ these remedies with success, or even with a degree of satisfaction to ourselves, it is necessary that we should be intimately acquainted with the laws of animal life, and of the powers which regulate the system, and direct its movements. Without which we should not be able to discover the seat and nature of internal diseases, or clear indications of cure. "The knowledge of the operations of the whole animal," says the illustrious J. Hunter, "or of its parts, when arising from a disturbed or deranged state, or a diseased disposition, are to be considered as the first steps towards a rational cure. But this alone is insufficient; the means of bringing the body to that state which accords best with the accident or disease, are also necessary, which will include the knowledge of certain causes and effects, acquired by experience, including the application of many substances called medicines, which have the power of counteracting the action of disease." Hence a mere knowledge of remedies is complete empiricism, and in the extreme contemptible. Some minds indeed suffer less pressure and enjoy a purer light than others. But it is impossible that

the mind of a conscientious practitioner should confine itself to a mere knowledge of remedies ; wherever it acts, it must reason ; the light and load of former ages are upon every thinking mind ; it is no more possible to escape than from the influence of the circumbient air ; and, whether in administering the pill or draught, it must always form its ideas not only of the operation of the medicine, but of the especial nature of the morbid state, for the cure of which it is administered. I shall now only further remark, that a multiplication of facts, or extensive experience, without deep reflection to arrange them, will merely perplex and confound the observer. As all ideas are derived from sense, all argument must consist of a statement of facts or perceptions. That which strikes the eye, more immediately engages the attention, and impresses on the memory serious truths. Hence the true way of making ideas durable, or rather, easily excitable, is to make them clear and distinct at first. On this account, it has been truly observed that *the art of memory is the art of attention*. But the association of certain diseases with their common remedies is frequently too firmly fixed in the mind of the physician to yield to the influence of reason ; and is, sometimes, cherished because it favours indolence. This association however does not exist in nature. With whatever accuracy the disorder may at first have been discriminated, and its nosological name and situation ascertained, the various circumstances of constitution, temperament, and previous habits, so necessarily modify its phenomena, that it would often be highly injurious to treat the same disorder, in two individuals, exactly in the same manner.

I shall now proceed to shew how far a correct comprehension of the nature of disease, and the operation of the remedies employed, point out a successful treatment.

TYPHUS FEVER.

WERE it possible to rouse and concentrate the attention of the community at large to this momentous subject, which may endanger at one time or other, the life of every individual, much essential benefit might accrue from the following observations and directions, on its causes, prevention, and early treatment.

EXCITING CAUSES OF FEVER.

The most contradictory opinions prevail on this subject. Some suppose, that genuine fever, in no instance, beyond those ephemeral irritations which are of daily occurrence can possibly originate without the previous application, either through the medium of the lungs, or the surface of the body, of a peculiar something generated in the system of another individual in the course of the same disease.

I am, however, of opinion, that the common excitive or mild inflammatory fever, or that disease usually known by the general but vague name of typhus, which is a febrile affection common almost to every climate, but more especially to Great Britain, and is here to be particularly noticed, almost always arises *spontaneously*, and is not often communicated by any intercourse with the diseased; and by common prudence it may usually be prevented. The principal cause may be traced to atmospheric or terrestrial influence. But on making this observation, I am aware I shall by some be regarded as absurd, particularly by those who attribute the cause or origin of typhus fever chiefly or perhaps wholly to infection arising from human

effluvia. No doubt without the co-operation of *other* causes, atmospherical influence, or exhalations from the earth, are insufficient to produce the disorder. I shall, therefore, attempt not only to make these appear clear and reasonable, but also how to be prevented. I am desirous fully to convince you of the possibility of warding off an attack of the disorder.

It must be allowed that a peculiarity, in the atmospheric influence of some years, or of some seasons, tends powerfully to produce certain diseases more than others. During the two or three last years, it has been the peculiarity, particularly in some parts of Great Britain, to induce typhus or mild inflammatory fever, but by the co-operation of other causes, in some other seasons, might occasion sore throat, or pleurisy, or catarrh, or rheumatism, or erysipelas, or a fever highly inflammatory. The characteristic symptoms of the various kinds of typhus also arise from the constitution of the patient, and are not the effect of any specific poison: hence, what will produce highly inflammatory fever in one constitution will produce one of a more languid and depressed type in another. The difference between these two fevers, is that in the former the sentient power of the brain is very slightly affected, while in the latter the cerebral system is in a morbid degree of irritation. In consequence of the disturbed state of the brain and nerves, and unbalanced circulation, a wonderful degree of general *oppression* ensues, which has unfortunately been regarded as *real* debility, and that the solids and fluids were imagined to be particularly disposed to decomposition or putrefaction, which erroneous notions it will be my endeavour to remove. Again we may have a kind of intermediate disease between these two, which deviations of febrile phenomena gives the variety to continued fever.

In the spring and summer of 1818, I remarked, that inflammation might have been said to be epidemic, par-

ticularly in the larger cavities, so called. The thorax, the heart, and its appurtenances, were affected almost as frequently as the pleura and lungs. The diaphragm was marked out with singular exactness as the seat by many patients, and others, each of whom, distinctly described an accompanying fulness of the epigastrium, with a particular sensation of weight and arterial beating about the back of the head. In others, both cavities (the chest and abdomen) appear to have been affected in succession. Rheumatism I have observed, has proved among all classes, and with the young and middle aged as well as the old, more than usually prevalent towards the end of July and during the whole months of August and September, 1820, and others have remarked, that some instances have occurred of different members of one family being so similarly and simultaneously affected, that the idea of contagion would have suggested itself, were it possible to conceive these kinds of complaints ascribable under any circumstances to that source.

Typhus occurs most frequently in autumn and the end of summer, when the days are hot, and the nights cold and chilly; but no season is exempt from it, and when the particular epidemic condition of the atmosphere, before alluded to, prevails, it should be the principal care of every one to avoid as much as possible, all those auxiliations which may lead to, or produce fever. Happily for us we know the contingencies which operate as exciting causes in producing this disease; and with greater precision can point them out. We know too, by what means these exciting causes induce that state of the body which constitutes fever; we are consequently not only better able to point to the causes which should be avoided, but also to the means by which the effects of such causes may be very much diminished, where inexperience or inattention has suffered their co-operation actually to produce fever.

People of strong and vigorous constitutions may resist the powerful influence of the atmosphere, and may even without much dread expose themselves to the action of exciting causes. But delicate persons, of either sex, and more especially those of tender years, are ever liable to an attack of epidemic fever, on the slightest aberration of conduct either in point of dress, diet, or being exposed to cold. It is easy to account for diseases being produced by these deviations ; but not to the unprofessional reader, I shall however make the trial.

Persons of delicate habit, particularly the young of either sex, are infinitely more susceptible of impression of every sort, than the more robust and vigorous ; indeed we know there are some delicate people who can, by their sensations, foretell the alterations of weather.

Young persons, from the acute sensibility of the nervous system, feel every impression, mental or corporeal, in a peculiar manner, discoverable by the face and bosom being in an instant suffused by a rush of blood to the vessels of the skin, nay, even from the effect of a single word or thought. Notice the effects of moderate cold upon their hands and feet ; they become red and soon crack into chilblains. It is this susceptibility to impression that occasions delicate or young people to be the peculiar victims of atmospheric influence ; and among the former we may mention the distressed poor, whose bodies have been extenuated for want of proper fare, and the mind depressed by hopeless misery. In a well organized body, in a good state of health, there is an elasticity, by which, that which is pernicious, is instantly repelled by the provident functions of nature. Every part of the complex machine performs its office with wonderful regularity ; but when adversity arrives, the mind itself sinks, together with the whole frame, and of course must now perform imperfectly, all its operations. That which is hurtful is no longer completely thrown off, either from

the skin, the kidneys, or the lungs ; and the digestive organs failing also, nature being no longer refreshed with new powers, becomes unresisting under the attack of circumstances, which, in a condition of vigour, however offensive, would have made no permanently injurious impression.

I have here then given a concise account of what medical men denominate *predisposition* to diseases generally. But should we add other matters equally necessary, such as extreme poverty,—want of sufficient wholesome diet,—clean comfortable clothing and bedding,—and what is still more material, the respiration of a contaminated atmosphere, not by the gases or effluvia only extricated by the functions of the skin and lungs, but with the accumulated poison the natural consequence of a number of persons crowded within a close place. I must, however, notice, that degrading as a state of mendicity is, not only to the community, and those engaged in it, but I may affirm, that common beggars are generally less liable to febrile infection than the more industrious, and at present the most dejected, portion of the poor. The diseases of professed beggars are generally those of indulgence and debauchery. They are never oppressed with care or anxiety about the future ; and not having any fixed residence, and ever so filthy in their persons, scarcely can typhus poison accumulate among them ; for ever roaming in the open air during the day, and soundly sleeping on the fresh straw of the farm-yard during the night, the effluvia disperses as soon as emitted from their bodies. But among the industrious poor the atmospheric influence exerts its principal power, having the co-agency of almost every cause that can possibly contribute to the production of fever ; and no doubt but among them, if contagion be not generated, the morbid influence of the atmosphere may become so strong, that the fever may be epidemic, even without the aid of contagion, and the disease extended, like the influenza, far and wide, parti-

cularly in large towns, in every street, and perhaps in every family, not sparing even the strong and healthy.

Nothing can more contribute to the production of typhus fever, or can be so efficient as the exposure to cold under certain circumstances. When the surface of the body generally is maintained comfortably warm, the circulation of the blood is equally supported in every organ essential to life; but when a great part of the surface becomes chilled and bloodless from defect of proper clothing, or being long exposed to cold or damp, the blood that ought to be there is thrown in upon the internal parts, and when there is nothing peculiar in the seasons, some disease in the form of inflammation, as a pleurisy, or the like, would be the result; at other times, however, from the peculiar atmospherical influence, the human frame is found to labour under a certain oppression, that prevents in many cases, those results; but occasions a general derangement in the balance of sensorial power, and of course of the circulating system, thereby instituting a fever. From these considerations parents cannot be too attentive, particularly in the cold season, to a regularity in clothing their children comfortably, woollens next the skin I strongly recommend; and to be especially careful as respects the warmth of their feet and legs. Such children whose feet and legs are naturally cold should night and morning, have them bathed with strong brine, or rubbed with a course towel dipped in the saturated solution of salt. By this expedient a due proportion of the circulating fluid would be excited efficaciously to the extremities, and chilblains, with many other evils, obviated. Young people should never be allowed to sit on their benches at school until they are chilled—and I would earnestly intreat young ladies to wear flannel drawers, and spencers with long sleeves, from October to the end of May, or perhaps more properly speaking, agreeable to the vicissitudes of the seasons, for no precise time can be stated.

Persons of delicate health, and females of languid circulation, ought to be particularly attentive to the adaptation of their clothing according to the increasing coldness of the seasons, which will be best regulated by their own feelings; and those things should be avoided, which occasion the body to be highly susceptible of the impression of cold or damp. The chief are, sitting in warm or crowded rooms; fatigue of body or mind; the indulgence in warm drinks; and sleeping with too many bed-clothes; for a fever may be expected as the consequence, from inattention to any of these circumstances, particularly to persons exposed to cold, and who are readily influenced by the peculiarity of the seasons. On the subject of bed-clothing, however, it may be necessary to observe, that we should be warmest clothed when asleep. The heat of the body is produced by the action of the living power, but although the heat of the body to the thermometer be the same in a person sleeping or awake, yet when asleep, he cannot communicate so much heat to the surrounding medium as when he is awake. This is obviously the experience of every one, who falls asleep with the ordinary clothing which he wears when awake; waking again, he feels extremely cold; that is, he feels the substances that surround him very cold. I therefore earnestly repeat, that too much caution cannot possibly be taken to avoid fever, and it is in the power of every one except the children of misfortune, whose clothing and fare are equally scanty.

Errors in diet, and inattention to the state of the bowels, may readily produce this fever when the body is under the influence of the atmospheric cause. The manner in which these causes co-operate in the production of the disease I will not at present enter minutely upon; such a disquisition would at first, and in this place, be too intricate for the comprehension of an unprofessional reader; I hope, however, to make it, in a future part of the work,

clear and interesting to those who may enter fully into the spirit of the subject. But I may repeat that they do co-operate, and that too, powerfully; of this we have sufficient evidence in our diurnal practice to convince us.

Should the stomach be burdened with an undigested and indigestible mass; or should the bowels become constipated from fæcal accumulations, the irritation thereby occasioned, under that condition of the vital powers incident to the influence of the atmospheric cause, will induce a case of fever more or less mild, but not inferior in smartness of attack to one produced by exposure to cold or contagion. Therefore the greatest attention should be paid to the regulation of food and to the occasional administering of medicine, especially to those who are, or may suppose themselves to be, more than usually subject to fever or any prevailing epidemic. There can be nothing more destructive than to eat without paying a due regard to the state of the digestion. In order therefore to direct our choice in point of food, we are to consider what we can *digest*, not what we can *eat*; and that if what we do eat cannot be digested, whether it be on account of its quality, quantity, or nature, is sure to become a source of irritation, and finally of disease.

We find very few ever siezed with typhus fever from the influence of the atmospheric cause only: it must be aided by one or more of the causes already mentioned, which every one in comfortable circumstances might avoid.

Even with those healthy strong persons, who are not easily elated by joy, or soon depressed by sorrow; whose nerves do not vibrate in sympathetic feeling to every trifling breeze that goes over them; and whose constitutions are in a great degree sufficiently endued to resist all atmospherical influence, circumstances of a temporary nature may arise, and for some time place their nerves in a state that shall put them on a par with the delicate and

the young, in respect of atmospheric susceptibility. Watching long by night—unusually great fatigue of body or mind—or taking wine to excess may subject the strongest and healthiest man or woman to the influence from without, and a fever may be the consequence.

We cannot too powerfully urge the necessity of early hours upon all classes of society, as one hour's sleep before midnight more effectually restores the exhausted powers of body and mind than two hours after that time. It has by no means been sufficiently noticed, that every person is more or less disposed to feverish irritation towards midnight; sleep tends most materially to prevent it. A tendency to perspiration generally commences in the morning, which should by no means be encouraged by a too long continuance in bed, as it will injure the already weakly state of the delicate, and render the healthy and the strong sluggish and relaxed.

CONTAGION OR INFECTION.

Dr. Haygarth, in his Letter to Dr. Percival on the Prevention of Infectious Fevers, asserts that not one in twenty-three or even one in thirty-three, escapes infection, when exposed for a sufficient length of time, and that as many persons are liable to receive typhus as the variolus contagion. But with respect to the period at which typhus fever becomes infectious after its commencement, the Doctor has not been able to determine. The latest period of infection appeared to him to vary from a few days to two months, without any regularity as to this point. "The simple inflammatory fever," says another writer, "at certain periods of the year appears in London, as well "as in any other part of the country, but it does not "run the same course here as it does in the country. In "the London constitution it induces great debility of the "system in a few days, disturbs the functions of the brain,

“and disorders the abdominal viscera. These symptoms
 “are soon followed by those which characterise typhus,
 “except in not being contagious. I have paid great at-
 “tention to the progress of this fever, and when it has
 “been most epidemic, I have never been able to trace its
 “extension to the influence of contagion. The case is,
 “when a disease becomes epidemic from a certain state
 “or condition of the atmosphere, medical men generally
 “attribute its prevalence to infection.—When catarrh
 “prevailed with more than usual degree of fever, some
 “years ago, the medical men gave it the fine-sounding
 “name of *influenza*, and pronounced it to be highly in-
 “fectious; and on that occasion we were pestered with
 “letters from physicians on the means of checking its
 “progress, and to many it was a productive harvest.
 “When inflammatory fever is excited in the London con-
 “stitution by a serious injury, it generally runs the same
 “course:—witness the fever which follows a compound
 “fracture of the leg or thigh in any of the London hospi-
 “tals: for three or four days it is a simple inflammatory
 “fever, or what Hunter termed sympathetic fever, but
 “on the fourth or fifth day, we find the brain is disturbed,
 “the nervous system extremely irritable, the abdominal
 “viscera more or less distended, the skin dry, and the
 “secretion of the kidneys, intestines, and probably of the
 “whole body, more or less morbid.—On the seventh day
 “the surface of the tongue becomes dark or black, the
 “lips parched, the mind wandering, the muscles of the
 “arm in constant motion; in fact, the person has in eve-
 “ry respect the characteristic symptoms of that fever
 “which these sapient scribblers term *typhus*. Now will
 “any practitioner say that such fever is infectious?
 “Again, let us look to the fevers attendant on visceral
 “inflammation, either within the chest or abdomen.—
 “If we have recourse to bleeding to the same extent as
 “medical men in the country in these cases, the vital

“powers of the patient sink, and the same symptoms fol-
 “low which in their opinion constitute typhus fever. The
 “fever which has been mistaken for typhus fever is a spe-
 “cies of what Cullen terms *synochus*, i. e. in the first state
 “inflammatory, and the second exhibiting the symptoms
 “of typhus without being contagious.—It is a disease
 “peculiar to large towns. During my attendance at Bar-
 “tholomew’s Hospital, finding the most favourable com-
 “pound fractures of the lower extremities uniformly to
 “terminate fatally in consequence of this fever, and, du-
 “ring my attendance at a provincial infirmary, the most
 “complicated compound fractures of the lower extremi-
 “ties turning out favourably—the life and the limb being
 “always saved under a mode of treatment very similar, I
 “was induced to enquire of Mr. Abernethy and Sir Charles
 “Blicke the cause of these different results.—Mr. Aber-
 “nethy declined giving a decided opinion; but Sir Charles,
 “without the least hesitation, attributed it to the differ-
 “ence in the air, and, this being the prevalent opinion
 “among medical men in London, I was induced to ex-
 “amine the air of the London hospital, and that of an
 “hospital in the country, but I was not able to discover
 “the least difference in them, for the atmosphere of the
 “wards of the London hospitals contained as much vital
 “air as that of Malvern in Worcestershire, which is so
 “much extolled for its purity. Now, as the brain and
 “nervous system are more disordered by fever in London
 “than in small towns, may not the change which soon
 “takes place in the inflammatory fever of London be oc-
 “casioned by the exhaustion of a vital principle (electric
 “or Galvanic matter) which we derive from the earth or
 “the atmosphere? The brain, I believe, is generally
 “allowed to possess an electrical or Galvanic power;
 “and if so, I should suppose that it was supplied with
 “either of these subtile fluids from the earth, The treat-
 “ment generally adopted for the cure of this fever, I

“believe, is one cause of its fatality.—Bark, wine, and
 “brandy, I have no hesitation in saying, have destroyed
 “more lives in this country than the sword. If the pa-
 “tients afflicted with such fever were allowed to follow
 “their own inclinations in drinking copiously of cold wa-
 “ter, exposing the body to a cold air, occasionally im-
 “mersing it in cold water, and frequently applying cold
 “water to the head, they would stand some chance of re-
 “covery. The cold water will not only cool the inside,
 “but, by diluting the secretions of the stomach, liver, and
 “intestines, and by acting gently as an aperient, greatly
 “tends to quiet the system, while the cool air and occa-
 “sional immersion of the body in cold water, by conducting
 “superabundant heat from the system, would speedily
 “bring the fever to a favourable termination. As some
 “nutriment may be necessary, the diet should consist of
 “chicken broth occasionally thickened with arrow root.
 “If the London constitution does not make a good stand
 “against inflammatory attacks, it certainly is much less
 “liable to them than people who reside in the country.”

On the subject of contagion I shall merely further ob-
 serve, that fever only becomes infectious from ignorance
 or negligence. I have before mentioned, that the exciting
 cause of fever depended on a certain state or condition of
 the atmosphere, but I did not wholly mean to deny that
 fevers never exist of a real contagious nature, from a pecu-
 liar matter entering the system, possibly by the lungs; for
 we find that the urine will smell strongly of turpentine
 a few hours after its vapours have been received into the
 lungs. Hence then, although fever arise spontaneously
 in one or more persons, yet, when it is generated, it may
 by neglect of cleanliness, and ventilation, in addition to
 the previous condition of the atmosphere, either become
 contagious, or the causation of the former air so aggrava-
 ted and strengthened that by its concentrated force an
 incautious visitor or attendant is more readily and pow-

erfully attacked. This, however, may by attention generally be prevented.

The foregoing quotation will be read with interest and instruction, and although I do not believe that one fever in twenty arises from contagion, yet it is in some respects decidedly for the benefit of the public, that Dr. Haygarth's opinion that it is infectious, should popularly prevail, because it inculcates the propriety of attending to cleanliness and ventilation, precautions which not only greatly contribute to the recovery of the patients, but secure others against the malady. Dr. Bateman, who believes typhus to be contagious, is certain, that the apartment occupied by the sick may be rendered perfectly innocuous by free ventilation, &c.

Erysipelas is said to be epidemic in particular seasons and districts. It is also said to be infectious. It may be that the difference between epidemic and contagious disorders is not always readily ascertained. Erysipelas cannot be inoculated by the matter from a vesicle, nor by surrounding a limb violently affected with erysipelas, with a bandage moistened in water; and when the bandage was thought fully charged with any morbid effluvia present, the skin of the arm of another person was abraded, and surrounded with the bandage thus impregnated, without the disease being induced. These experiments have often been repeated with the same results. In what way then do wounds and ulcers become erysipelatous when in the vicinity of one labouring under erysipelas? Either the matter in the vesicle does not comprise the infectious principle, or the effluvia, and not the fluid of the affected part acts locally, and thus generates the erysipelatous inflammation: or, is it that the infection or the atmospheric influence is admitted into the system by the lungs, or irritates the mucous membrane of the alimentary canal, or otherwise, and that the system is first affected constitutionally, the wound or ulcer exhibiting the topical and

external symptoms of the disease, whereas the preceding febrile symptoms, such as cold shiverings succeeded by heat, head-ach, somnolentia, and thirst, point out that the system was first affected, and the cutaneous efflorescence a secondary effect ?

The atmospheric influence, however, is to be distinguished from cold or humidity ; these are conditions of the atmosphere distinct in nature from that imperceptible agent to which I refer as the main cause of typhus fever. Yet these particular states of the atmosphere might contribute efficiently to the development of the disease, as has been already shewn.

PREVENTION OF FEVER.

I shall now consider in what manner a patient labouring under fever ought to be managed in order to prevent the generation of active contagion, or the concentration of atmospheric influence. Fortunately the extraordinary melioration in the modern practice of medicine, as it relates to the treatment of fever and febrile diseases, tends greatly to prevent the generation and concentration of contagious effluvia. The use of the tepid bath at the beginning, and not only repeated copious cooling ablutions during the stage of excitement, but the terrors of our predecessors, in relation likewise to cold air, are fast departing ; and the importance of its free admission in the apartments of the febrile sufferer particularly, comes to be generally acknowledged and applied ; the linen being repeatedly changed, the disuse of sweating medicines, and the free employment of opening remedies, all tend most powerfully to obviate the generation of contagion.

In addition to these wholesome measures, I would recommend the taking down of the bed curtains, the sheets and pillow cases to be changed at least twice a week, and the patient's linen daily. The hair in the living animal

having not only the property of retaining caloric, but being a conductor of electric matter from the atmosphere, ought to be cut short, if the attack be severe, so that the head, with the face and hands, be every day during the disorder washed, and the best time for doing this is when the heat of the body is at, or nearly approaching to its acme or greatest height, or at this period it may be repeated if it should have been done before. The windows to be kept open the whole day, and it may be proper also by night, until the time of convalescence. A small fire may be kept in the room, in order to give circulation to the air, more than warmth to the apartment. The motions to be removed in order to be inspected by the practitioner, which should never be neglected; and towels, pocket-handkerchiefs, dressings taken off blisters, and all other things imbued with the excretions of the patients ought, as soon as possible, to be submitted to a boiling heat. By carefully following these instructions, even in the worst forms of typhus fever, little or no danger, is to be apprehended to those who attend on the patient.

THE PHENOMENA OR SYMPTOMS OF FEVER.

The more clearly to illustrate the treatment, I shall now briefly consider the first symptoms, or what the morbid appearances are likely to assume, when an individual, from one or an union of causes, is attacked by *simple inflammatory fever*, commonly known by the name of *typhus*, and absurdly termed *low nervous fever*, when unfortunately protracted by improper treatment.

It is not, however, by the information I am going to impart, which is founded on actual experience, my wish to supersede the necessity of medical advice and attendance. I particularly wish that no time be lost in sending for the medical man, as it may not only save life, but speedily restore health to one labouring under idiopathic

fever without placing the patient at the hazard of miscarriage, or of a long illness by any obstinate opinion or attachment on the part of nurses or friends to old practices and doctrines which had better been exploded long ago. It ought to be made *universally* known, and never lost sight of, that the fever of which we are now discussing, although it has often been denominated the British Plague, is not in its own nature a malignant one, and that *if properly managed at the commencement*, it will never become so. This declaration may indeed appear strange; it is, however, a fact.

Fever sometimes appears to commence in the brain, with pain in the head, &c., without giving much disturbance to the constitution for three or four days; at other times the stomach and bowels are first attacked, and the head is not affected for some days afterwards. In general, however, the person is at first affected with languor or sense of *oppression*, a process very different from what has been erroneously implied by the far-famed word *debility*; a sluggishness in motion, with some pain in exerting it, together with repeated yawning and stretching. The face and extremities become pale, the features gradually fall, the size of all the external parts are materially lessened, and the skin over the whole frame seems contracted as if any thing cold had been applied to it. At the approach of these symptoms, some coldness of the extremities, though scarcely felt or noticed by the patient, may be observed by another person. As the patient's sense of cold increases, it will occasion a tremor in all his limbs, together with repeated successions or rigors in the trunk of the body. When the cold sensation and its effects have, for some time continued, they will of course become less violent, with alternate warm flushings. The cold will go off by degrees; and a more than natural heat will prevail and continue over the whole body. This heat will cause the colour of the skin to return, and a

more than natural redness will appear, particularly in the face. During this heat and redness, the skin will become relaxed and smooth, but will remain dry for some time. All parts of the body and especially the features of the face will resume their usual size, and become even more turgid. The heat, redness, and turgescence, having increased and for some time remained, a moisture comes on the forehead, and by degrees extends down a part or all over the body. If the fever be of the intermittent class, the moisture will become a general and sometimes a profuse sweat, and as it continues to flow, the heat of the body gradually lessens; the sweat after remaining for some time ceases by degrees, the body will return to its common temperature, and most of the functions will assume their usual state, and this for a shorter or longer period, as the disease may be a tertian, a quartan, or a quotidian. But if the fever be the continued, or simple inflammatory kind, it will have little intermission, the exacerbations and remissions are at first or soon will become very imperceptible, and the disease, when once completely established, may run its course, in defiance of medicine, and whether it terminates fatally or otherwise, will in a great measure depend on the natural constitution of the patient; hence the great importance of arresting the progress in its onset. Should we fail to effectually check it, we have this momentous result, that we may almost always succeed in abating the symptoms.

Typhus, or simple inflammatory fever, has a first stage of oppression, a second of excitement, and a third of collapse.

That unprofessional persons may the more readily recognise the symptoms of typhus fever, as they may appear in different individuals, I will suppose the following cases :—

First. Miss A. may for some days, from first to last, a period, perhaps, of two or three, complain of a confu-

sed state of the head, loss of appetite, at intervals chilly, she feels considerable pain in the limbs, especially in the small of the back ; she also feels *oppressed*, as if from *real* debility ; loss of spirits, the tongue somewhat white, the bowels may be constipated, though the skin be not yet hot, the pulse, if frequent, is feeble and struggling ; the countenance is commonly pale, and displays much anxiety, and there generally is some degree of livor or darkness in the integuments surrounding the eyes. This being the *first stage*, of the usual mild fever, it will be highly important, from what will follow, that we keep this circumstance in remembrance.

Second. Mrs. B. a healthy young woman, complains of a failure of appetite, with an attack of head-ach, and considerable depression of spirits, a sensation of lassitude, pain in many parts of the body, more especially the back and limbs ; her countenance exhibiting a pale yellow cast. The sense of coldness, nausea, &c., are as usual struggled under for some days, perhaps near a week ; but at last, restlessness and delirium, especially during the night, with excruciating head-ach, coming on, she is consequently confined to her bed, the pulse varying from 100 to 120 in a minute, and hard, with great heat of the skin, and continual thirst. With the erroneous view of supporting the patient's spirits and obviating debility, the excitement prevalent at the onset of this case is, as usual, made worse by previous circumstances ; particularly a diet more heating and full than ordinary.

Third. Mr. C. an industrious sober tradesman, is seized with a feebleness and loss of appetite for some days, without much pain ; coldness follows during the night, by inordinate heat, and disturbed sleep, without any marked delirium. He continues during the day at his employment under a feeling of weariness, and depression of spirits. At length, however, he is confined to his bed, the natural heat hardly augmented. His pulse beating

from 80 to 85 in a minute. He complains more of a heaviness than pain in the head. He being usually constive, this is remedied by mild laxatives, together with drink of thin gruel, accidulated with cream of tartar, and sweetened with sugar, honey, currant-jelly, or the like ; without any other medicine, except two or three active doses of calomel and jalap, at the beginning of the disorder ; he however, recovers gradually ; a general moisture over the whole surface taking place on the ninth or tenth day from the time of confinement to his bed, on the first appearance of which, he is allowed at occasional intervals, weak veal-broth, currant-wine whey, or the same wine diluted with water.

Such mild forms of fever, however, is not usually to be expected ; as there are very many cases, in which all the symptoms, delirium, with some slight head-ach, or increase of natural heat, or frequency of pulse, the alternate feelings of chilliness and heat, will occur in a degree very highly aggravated ;—as strong delirium, intense head-ach, intolerable thirst, much restlessness, great permanent heat of the skin, with a quick, and, in the commencement of the disease, a tense and hard, but often small, and sometimes irregular pulse ; whilst the arteries of the temples and neck frequently appear, from inordinate distension, to beat with increased motion and force, with flushing of the face, redness of the eyes, denoting a considerable determination of blood to the head ; the pulse, however, if these symptoms be not speedily relieved, gradually becomes feebler and still more frequent ; a considerable increase of the fever is observed every evening ; and in a few days the delirium becoming constant, at length changes to a stupor ; an observable alteration in the countenance, yellowness of the skin, petechial spots, irregular and partial alternations of heat and cold, without the intervention of the perspiring state, with other threatening appearances, and finally ending in death.

Along with the most strongly marked symptoms of typhus fever, a short cough, oppressed breathing, and a sharp pain in the side, especially on inspiration, are no unusual concomitants.

These may fairly be considered the general symptoms, but before entering on the treatment of typhus, or simple inflammatory fever, it may not be improper to take a more minute review of their appearances. I am aware, that according to the present mode of practice, it is unusual for physicians, or even the leading surgeons as they are termed, to perform phlebotomy ; but in compliance with my own notion of peculiar events, I found it desirable to set these formalities and ceremonies aside, and gave public notice of my intention to bleed gratuitously all those who might have occasion to lose blood ; and after noting the symptoms, and having bled with my own hands, some hundreds of patients, I wish to state the following observations.

Various organs were permanently, but slightly or severely affected, according to the type and duration of the fever. Head-ach, watchfulness, visual illusions, delirium, &c., marked the sensorium or brain as the part affected in some ;—the coated tongue, the flushed cheeks, and diarrhœa or purging, pointed towards the bowels in others ;—whilst cough, dyspnœa or difficult respiration, with or without expectoration, indicated that the viscera of the thorax or chest bore the brunt of the increased action. These indications of disease, though here mentioned separately, are frequently more or less combined.

Head-ach more or less was nearly, without exception, the complaint of every one, and was generally amongst the first symptoms, although it not unfrequently steals on in typhus by almost imperceptible impressions. The pain occasionally was general over every part of the head, but most commonly it was referred to one or more distinct regions, the frontal and temporal regions generally ; though not unseldom to the occiput or vertex. In two or three

cases, particularly where the patient was affected with violent periodical head-ach, the pain was felt most severe in the more depending part, in whatever posture the head was placed. Sometimes the pain was dull and obtuse, attended commonly with *gravido capidis*, pain and stiffness of hind neck, heaviness and pain of the eyes, more especially on motion, and sometimes with *lachrymatio* or flow of tears, a sense of stuffing in the nostrils, or *coryza*, as occurs in *catarrh* from cold; but most generally the pain was acute and throbbing, darting from the part more immediately affected in various directions through the head. Frequently these pains were mentioned as being deep seated, some times as being more superficial; in other cases from the patient's account, appearing nearly to be a rheumatic affection of the hairy scalp. All of these varieties of head-ach were most commonly attended with vertigo or giddiness, and *tinnitus aurium* or imaginary sounds were heard, particularly when the patient was obliged to move himself in bed, or attempt to assume an erect posture, which likewise very generally aggravated the pain of the head. Besides all these symptoms there was also in a very great majority of cases, some flushing or fulness of the face, and suffusion of eyes. Some one or more of these varieties of the head were so very constant as to be almost always present. With these the patient sometimes moaned much, at the same time the whole countenance exhibited evident marks of the oppression which was going on within; the head-ach was sometimes moderate, but generally present in some degree. Many people indeed, who came to me appeared to have no particular complaint, except slight head-ach and some degree of irregularity of the pulse, though assuredly affected with the disease, being afterwards visited with its graver symptoms. These pains were very frequently removed, at least for a time, by moderate bleeding, or even the use of leeches; but more generally, after a

small interruption, they again appeared, with violence very little diminished, unless when the bleeding was followed up for three or four days by a regular and active action upon the bowels by the use of jalap and calomel, or the saline cathartics, as also mentioned by Surgeon Collingwood, which will be hereafter noticed. When, however, the patients, with *violent* head-ach, vertigo, tinnitus aurium, flushed face, and suffused eyes, complained greatly of light or sound, and throbbing of the temples, with or without delirium, I ranked them as being affected with symptoms of inflammation of the brain, or its meninges. I mean not, however, to be understood that when these symptoms were present, there was generally acute inflammation absolutely existing in the contents of the cranium. But by the above enumeration of symptoms the reader will be better enabled to judge of the varieties or various appearances which this fever assumes, and in the latter instances although acute inflammation may often not be present at first, it almost ever, if the disease be permitted to remain any length of time, supervenes, and that too sometimes very speedily. But the sensation of pain is not immediately confined to the head; the limbs are frequently affected with severe pains, and occasionally even with spasms, which sometimes remain very obstinate. Irregular muscular action certainly forms one link of febrile symptoms; and if to this be added the cases affected with tremor, the ratio becomes far from inconsiderable. Singultus or hiccough, and subsultus tendinum or twitchings of the tendons, in neglected fever, also frequently make their appearance towards the latter periods of the disease, and though usually reckoned fatal symptoms, may often be made to terminate favourably. It must be evident that in these severe types of fever, more active and copious bleedings will be necessary than in the former cases.

The *appetite* ever becomes worse, though it will fre-

quently return very quickly after the crisis of the fever.

The *thirst* will be considerable, frequently very urgent.

The *tongue* generally exhibits various appearances in different individuals; and, although the several changes from the condition in which it appeared during the force of the fever, might bear some steady relation to the general improvement of the case, yet the condition itself was extremely diversified in different individuals. In many it was white and dry, sometimes dry and white with a brown streak in the centre; in others, the same colour was united with moisture. In others, the fur which adhered was of a greyish colour, and to all appearance viscid. It sometimes presented a glazed aspect, or was a little swollen, with a slight or no appearance of fur on its surface, but of a dark red, brown, or yellowish semblance, and not unusually tremulous, and with difficulty produced; added to these appearances there was frequently a bad taste in the mouth.

The *fauces*, perhaps in about four out of twenty cases, were more or less affected. This affection in the greater number of instances was very slight, and only felt in the act of swallowing. On inspection, sometimes no uncommon appearance of these parts could be perceived, or they merely appeared a little parched, or were, in a very trifling way tumefied and inflamed. This swelling and inflammation in other cases, however, was very great, giving much uneasiness to the patient; there was likewise occasionally some superficial ulceration, or more properly excoriation of these parts.

The *tonsils*, in a few instances, were very greatly inflamed and enlarged so as to resemble cynanche tonsillaris. In one case these symptoms were accompanied with glandular swellings in the groins, which induced the patient to attribute his complaints to a venereal affection, until a speedy and severe determination of blood to the head, with general fever came on, and effectually decided

the nature of the disease. But upon the whole, the affection of the fauces may generally be regarded as a trifling occurrence, requiring little attention, if the treatment for subduing the fever be properly conducted. Independent of the act of deglutition, other parts of the alimentary function were affected ; nausea, retching and vomiting were often present.

The *pulse* nearly in every case was quickened from 90 to 130 or 140; and sometimes was above 150 beats in a minute, and pretty sharp ; scarcely ever soft and free at the commencement of the disorder. In many individuals it was full and strong, and usually rose considerably after bleeding. In some few cases, the pulse, towards the period of crisis, was irregular or even intermittent, and this sometimes in the convalescence remained for several days, though it had been completely regular in the whole course of the malady. The pulse, in some instances, during the first few days of this period, was remarkably slow, in some cases as low as 40 beats in a minute, but it rose gradually to its natural standard as the patient gained strength.

The *countenance* generally was anxious and shrunk, so that had this symptom been united with the general oppression, and typhomania, or a complication of phrenzy and lethargy with fever, (which was not unusual as the prominent phenomenon of fever) it might easily have been represented as a formidable picture of typhus gravior. But the collapsed and dusky appearance of the countenance, must often either have gone off previous to my seeing the patient, or had not at all been present, as the face was very frequently flushed and the eyes suffused.

The *mind*, particularly when the disease was procrastinated, in general became more or less affected ; and though, in several, the delirium was of the kind termed typhomania, in some it was furious and wild. Others raved incoherently in the progress of the fever, more

especially during the night-time, who seemed at first very sensible; whilst, on the contrary, it was by no means unusual for a person affected with high delirium to become quite calm and manageable after losing a sufficient quantity of blood.

In general the *sleep* was much depraved, or completely done away, in which last case the sick passed the night entirely in a state of agitation and restlessness, though he felt a degree of inclination to sleep towards morning; and it was noticed, that at this time, every species of delirium had a disposition to become more mild, or to wholly disappear.

Dreams were often troublesome. Though not a symptom favourable, they seemed to me never to indicate any more than the irregular state of the sensorium existing at the time. This perturbation is so common, that patients roused from a seemingly sound sleep, have positively declared that during the whole night they had never closed their eyes.

The disturbed state of the mind shewed itself plainly in a variety of forms. The simplest of these probably was that just described, of horrid dreams; and the next order in the series was insensibility, dulness, or inattention to external impressions. Questions were, in this condition, slowly and unwillingly answered; though sometimes correctly enough, but hurried, and in a whining way indicating the patient's dislike to conversation. Frequently, though the answer at first was sufficiently connected, was often broken off by a relapse into the above described insensibility; and if he continued to speak, it was in a sort of mutter, which became totally inconsistent and unintelligible. A higher degree of the same disquietude was, when the intellectual faculties appeared so completely lost, as not to be comprehended at all, what was said to them, or did not notice it in the smallest degree. This state, however, was not always

connected with insensibility and drowsiness ; as some so affected, muttered much to themselves. Absolute delirium, as before noticed formed the highest discovery of the active morbid state of the sensorium. The voluntary or moving powers were often greatly depressed, so that much difficulty attended the persons turning themselves in bed. Towards the end of the disorder floccilation or picking of the bed-clothes, tremors, and subsultus tendinum, sometimes occurred ; but that these irregular motions are, positively, referable to depression of the moving powers, I consider uncertain, being more likely to depend on the deranged actions of a very different class of organs,—the nervous system. More notice will be taken of this very important class of symptoms in other parts of this dissertation, and where I speak of Dr. Bateman's judicious work on fevers.

Sensation of *pain* is not, however, confined solely to the head. By far the most serious, yet least remarkable train of symptoms referable to this class, is the pains of internal organs, such as those of the breast, præcordia, and abdomen or belly. The first commonly produces some difficulty of breathing, of course rarely escapes the notice either of the patient or his attendant, whilst the others, not being in the way of any very active functions, and always attended with decreased sensibility, frequently passes without sufficient attention being paid to them.

In numerous instances *respiration* was greatly affected ; sometimes there was a pressing cough, sometimes with expectoration, and at other times without, exciting pain in various parts of the thorax, and in many cases an inclination to vomit. Frequently it was excessively rapid, even where the pulse had been nearly reduced to its natural standard, after an active and powerful bleeding. The cough was occasionally attended with hoarseness, and was very frequently excited by an attempt to take in a full inspiration,—an endeavour indeed, which very com-

monly occasioned pain or coughing, or both ; but it sometimes happened that hoarseness was not attended with cough.

There were, in about four cases out of twenty, symptoms of *inflammation in the chest*, marked by pain, either sub-acute or acute, in some part of the thorax, generally attended with and increased by coughing, affected by the posture, obstructing the free act of breathing, sometimes attended by a sensation of closeness or tightness across the chest, harrassing dyspnœa, or even orthopnœa, that is, a very quick and laborious breathing, during which the person is obliged to be in an erect position. This affection, in numerous cases, was severe, not unlike an attack of pure pneumonia or inflammation of the lungs ; though the other symptoms shewed, at the same time, that it was combined with continued fever. Sometimes it might be compared to peripneumonia notha or catarrhus senilis. Occasionally much pectoral affection remained a considerable time after the fever had been subdued, and greatly retarded the recovery, although its progress was most commonly very soon put a stop to by the means employed. But the thoracic inflammation most commonly seen united, early or late, with typhus, assumes the half-acute form, and seems to begin in the interior membrane of the trachea, or in the pleura. This is the modification of the disease to which I shall more especially direct your attention, as being less calculated to occasion alarm, than what has been before noticed.

This inflammation of the half-acute kind commences generally in the trachea, like common catarrh, with tension and considerable pain across the forehead ; the eyes feel heavy, stiff, and slightly tender ; cheeks flushed ; the lips of a deep redness, and much fulness of the face ; uneasy sensation in some particular part of the trachea ; hoarseness, or huskiness in the voice ; respiration somewhat difficult, together with more or less stricture, weight,

or soreness in the chest. In addition to these symptoms, there is considerable cough, that at times excites retching or vomiting. At first it is dry, though in a few days will be accompanied with expectoration of loose or viscid mucus, streaked now and then with blood. These several appearances will undergo little alteration for some days, and may disappear spontaneously; but most commonly the breathing will become every day more oppressed, and the cough harder, particularly at night. Whenever sleep takes place, which is generally of short duration, the chest will heave with a more than usual effort, and the lips in that state will not be closed; indeed, the mouth will be considerably opened, and the breathing will be somewhat interrupted, attended with a thick noise. The patient is often disturbed by a fit of coughing, when he generally spits up a little mucus, and remains in a state of irritation for some time, complaining mostly of head-ach, uneasiness in the breast, thirst, and dryness of the mouth. The pulse, as the pulmonary disorder advances, becomes more accelerated; and there are sometimes sudden attacks of the shortness of respiration, occasioned perhaps from a collection of phlegm, or it may proceed from some spasm of the bronchial passages, caused by the irritation of an inflamed surface. The breathing, however, independently of such attacks, gradually becomes more laborious and audible, and pain, soreness, or distress of some sort is felt in the chest, more especially on the posture being changed, or on sneezing, yawning, or coughing. The irritability of the system increases; the motion of the cartilages of the nose which form the nostrils greater; the heat of the body and condition of the cuticle more changeable; the countenance more solicitous; and the lips and tongue become more of a lead colour. The head, though from the first heavy and more or less vertiginous, is at length troubled with continual delirium; and after suffering much, the patient at last

expires, under coma, convulsions, or suffocation. The before mentioned, however, is no unusual manner in which the sub-acute kind of pulmonary inflammation proceeds, and it is generally protracted somewhat longer than the second week. There are however times in which it takes a different course; and though the seeming mildness of its symptoms may not indicate instant or even remote danger, an unexpected and sometimes mortal change may take place, either from the inflammation suddenly increasing in the trachea (windpipe) or its branches, (bronchiæ), or from its having extended itself to the substance of the lungs. Bronchitis is often very insidious from its apparent mildness, and the breathing is, of course, generally less laborious than when the lungs are affected. I have in a few instances seen the inflammation commence as a common cynanche tonsillaris, which has produced some ulceration in the throat, and having spread to the windpipe, occasioned an association of symptoms very alarming.

It will be seen from the above enumeration and regular progress of symptoms, that I believe ulceration of the trachea is oftener the cause than the consequence of inflammation of the mucous membrane of the bronchia (bronchitis). But the mucous membrane of the bronchia being a continuation of that of the trachea, when inflammation exists in the first, it, doubtless, extends to the last, and *vice versa*. I have found in examples above mentioned, the lining of the trachea very vascular after death, and a large quantity of mucus in the bronchia, frequently mixed with purulent matter. But it is well known to those who have an accurate knowledge of morbid appearances after death, that the bronchia is always more or less loaded with mucus, and that the blood-vessels of its mucous membrane are more or less distended, even in subjects who died of a disorder very remote from the thorax; it is therefore my anxious wish to guard

the young practitioner, in his inspection of bodies after death, against falling into the same error as a late writer (Dr. Hastings) has done on bronchitis. When the patient died of diseased organ, either of the belly or thorax, and the Doctor found the mucous membrane of the bronchia inflamed, although no symptoms of this inflammation appeared before death, or otherwise, were wholly overlooked, he declares instantly the case was one or other of his *varieties* of inflammation of that membrane. The primary affection being in the intestines, &c., as in case 19, where “the ileum was very much inflamed, “and the mesenteric glands which were included in that “part of the mesentery which was near to the inflamed “ileum were also inflamed, and some of them were near- “ly gangrenous,” and “the spleen was pulpy, and its peri- “tonæal coat was much inflamed,” was immaterial; “the trachea was found full of frothy mucus and pus, as “were also the bronchia and air cells;” and, therefore, was a variety of one of the species. The learned Doctor, after anatomical investigation, informs us, that this was a case of “bronchitis without any of its usual symptoms;” but I strongly suspect there are very many who may be “bold enough to assert,” that the Doctor has too often been betrayed into a false diagnosis, prognosis, or erroneous treatment; and that the patient, in the above instance, died from other causes than bronchitis, which his treatment was far from being calculated to subdue.

The treatment of inflammation of the mucous membrane of the trachea and bronchia has already been briefly noticed at page 22; but I must again endeavour to impress on the mind of the reader, that if fever was properly managed at the beginning, bronchitis, or any other unfavourable disease, would rarely supervene.

Symptoms, however, of *inflammation of some of the abdominal viscera*, were present in nearly ten cases in twenty where the disease was protracted. This appeared

under various forms, generally resembling peritonitis, enteritis or gastritis, and not unfrequently hepatitis ; but it seemed to me that symptoms of inflammation of the liver exhibited themselves far more rarely than what most writers on this disease have stated. One would imagine from the seat of the pain frequently complained of by the patients, that the spleen is as often affected as the liver. I have certainly seen some instances of a nephrotic affection tolerably distinctively marked, and hysteritis has been particularly indicated in two or three cases where women had been recently delivered. Cystitis I have seldom seen. Many patients, however, have complained of much tenderness to the touch in the region of the bladder, which chiefly arises from retention or difficulty of voiding urine. This symptom should be more enquired into than it generally is, some patients having a delicacy in mentioning it ; and I have frequently noticed an alarming increase of the pyrexial symptoms from urine being suppressed, and in consequence suggest, that every practitioner ought always to ascertain whether it is passed off every day in a sufficient quantity ; and should by no means allow himself to be deceived, should it constantly dribble away, as in that case, the catheter is in general absolutely essential ; independent of the particular attention which is then necessary in order to prevent excoriations of the perinæum or neighbouring parts. It is of much importance to remark, that cathartics greatly prevent that tendency to suppression of urine so common in severe fevers, and if the bowels be kept properly open from the commencement, neither a complete nor partial suppression of urine will scarcely ever be witnessed in typhus, or indeed in any other fever. It may, however, be observed, that in febrile complaints, where a small quantity of urine is secreted, the sediment is copious in proportion ; and, that, where a large quantity is secreted, the sediment will be scanty in proportion.

I would not, however, be understood to mean that

these affections are often well marked, or that they even should obtain the whole of the characteristics of the disorders to which I have compared them. They were indeed some times so particularly marked, as to claim the principal attention both of the patient and practitioner, and left little doubt as to the nature of the affection, but more frequently the contrary occurred; and it was only, as I have before observed, by active examination, that many of these symptoms were ascertained to be present, the patient's attention being much oftener directed to symptoms more apparently urgent, but frequently of much less importance.

Simple excitement of the circulation is by no means always easily distinguished from actual inflammation. Yet every experienced practitioner will readily admit, that fevers sometimes take place, in which there is a general increased action of the heart and arterial system, without inflammation; as might be instanced in the disease of lying-in women, termed the weed, in the mildest forms of intermittents, and in some of the febrile affections of children. But what, I would ask, is the difference between simple excitement of the circulation and inflammation? It seems that the principal difference consists in the state of particular parts, and not in the general circulation. The larger arteries as well as the heart are equally increased in both; but in inflammation there is always a greater local flow and accumulation of blood, than in simple excitement. Notwithstanding topical determination of blood arises generally in disorders of simple excitement, yet we frequently see it terminate spontaneously, by what may be termed pure resolution: but a termination like this is comparatively rare in actual inflammation. It must, however, be allowed, that the topical determination which usually attends simple excitement, has very frequently a powerful predisposition to inflammation; and indeed passes readily into the latter state, from the nerves of the part becoming more excited and the heart continuing to

propel too much blood into the capillary branches. In fact, simple excitement of the circulation and inflammation have a natural affinity, and may approximate so mutually as to be actually lost in each other.

Hence the condition of the circulation in the second stage of simple typhus must necessarily resemble inflammation ; yet, strictly speaking, the organs most materially affected, by augmented determinations of blood, may be said to be excited, rather than absolutely inflamed. Although, as shewn in the preceding pages, this stage may, and indeed occasionally does, proceed without decided inflammation, still, however, as topical inflammation may arise during its existence, the medical attendant should be particularly careful, and not too confident, that the malady will ever continue to be one of simple excitement. Indeed it will seldom or never run its course so. He should therefore be always upon his guard from the commencement ; and, every day, make the most minute and scrupulous inquiries, in order the better to enable him to detect, and, as much as possible, to seize the very first appearance of inflammation coming on unexpectedly in a vital quarter.

It is generally admitted to be a law of the animal economy, that when any part of the frame is once put in a state of irritation, there is a greater afflux of blood than natural in that direction. It by no means unfrequently occurs in typhus, that there are sudden determinations of blood to the chest which almost as quickly recede, and are followed by similar determinations to the head, and *vice versa* ; or there may be more than one local irritation and determination at the same time. This should always be remembered in typhus and similar fever, and whenever such irregularities of the circulation take place, they ought to be constantly and promptly noticed, lest they should eventually injure the structure or functions of the parts thus affected.

An uneasy feeling, with a sensation of weight and oppression, in the epigastrium, or at the præcordia or pit of the stomach, was almost a general complaint. The pain and tenderness was almost ever made worse by pressure, coughing, or replete inspiration, and was very frequently independent of every perceptibly deranged state of the abdominal viscera. This symptom some have imagined to arise from increased sensibility of the peritonæum at that part; by others to an inflammatory affection of the higher abdominal muscles. The seat of this pain was not often limited, but generally was diffused over a large portion of the epigastrium, sometimes over every part of it, and often shooting into the adjoining regions. This symptom, however, like many other of the abdominal affections, might frequently have passed unnoticed had pressure not been made; but it more rarely escaped the notice of the patient, than the pains of nearly any of the contents of the three cavities, if the cranium be excepted, and in many was the prominent and most troublesome symptom. In numerous cases the pain was violent, the tenderness to the touch very severe, and a sense of fulness and tension in the epigastric region very often present.

Nausea, wearisome retching and vomiting were frequent concomitants, pain of the epigastrium, much irritability of the stomach, together with almost an immediate rejection of food, appeared oftener in females than in males. Retching without nausea was occasionally very harassing, and sometimes was brought on by coughing. Spontaneous vomiting arose in a few cases, not attended by nausea, or any well marked, affection of the stomach or other viscus. Most commonly it happened during the night, and the rejected matter was usually bilious. Nausea and vomiting were occasionally very obstinate and harassing, and sometimes became, apparently, the prominent symptoms. Now and then they occurred spontaneously, but more often they were occasioned instantly when any thing was

taken into the stomach. Generally it appeared connected with some of the abdominal affections, but often also with the cephalic. In others it was present almost without any discoverable affection of any of the cavities.

The bowels were slow generally, though speedily answering to the medicines administered to quicken their action. There was diarrhœa in many, and in some cases a tendency to dysentery. Diarrhœa occurred in many and various forms. The stools were sometimes only increased in frequency, but the fæces natural; although usually morbid; generally the quantity small, watery, and bilious: in others of a clay colour and tolerably copious. They were in others scanty, slimy, and somewhat of a mucaginous resemblance, and sometimes scybalous and bloody, similar to that which occurs in dysentery. They were very often of a singularly foetid odour, and commonly of a blackish hue. Bloody stools, like bloody sputa, simply in itself is not a matter of much consequence; it frequently appears in the mildest cases, and oftener during convalescence, more especially soon after crisis, than during the disease. I have seen bloody urine, but this seldom happens, and of course little can be said respecting the importance of this symptom. All the different forms of diarrhœa were very often attended by tormina and tenesmus. In some instances diarrhœa accompanied the crisis. The importance of treating diarrhœa by blood-letting, when it appears in the early part of the disease, or when not accompanied with crisis, will be particularly noticed in stating Mr. Collingwood's cases.

CURE OF FEVER.

I have before asserted, that typhus fever would rarely, if ever, become malignant if properly managed at the beginning. In the treatment of this and other similar febrile diseases, we must therefore endeavour, without

loss of time, to lessen the cold in the cold stage, the heat in the hot stage, and not await the sanative process of nature, either, according to the old doctrine, of dissolving spasm, or of correcting and expelling morbid matter. But from what has been already remarked of its varying shades of character, it will clearly appear that the means of cure must vary with these ; in order, therefore, to illustrate typhus as it usually occurs, and to trace it through its regular course, I am obliged to return to my first case, or that comprised under the notification of Miss A., which points out its first appearance ; and I hope the picture is sufficiently accurate and striking to enable every person to recognize it when seen. At this first stage of the disease art can interpose with perfect success ; and it must be of the utmost importance to the patient that the medical practitioner be now consulted ; for in that state of the fever all the bases of its future character are laid. Until Dr. Robert Jackson's and Dr. Armstrong's inestimable publications appeared, this most interesting period of fever was almost wholly overlooked ; the disease was not acknowledged until the throbbing temple, the decided headache, the arid and burning skin, the bounding or rapid pulse, and the parched or slimy tongue declared the name and nature of the disease

On the appearance, then, of the symptoms described under case first, a medical man of skill who can safely carry the patient through all the stages of the disease, ought to be called in ; for it is a disorder which, although from ignorance and improper treatment, it has spread dismay and destruction far and wide, if judiciously managed, at the beginning, may be either greatly shortened in its duration, or made to run its course without danger to the patient, or attendants. But the *empirical* system which pervades many parts of this kingdom, and by which the inhabitants, even those who might be supposed to know better, have long done and still do obstinately de-

ceive themselves, by relying on the *consultations* of *half-practitioners*, or those physicians unacquainted with the different branches of the profession, and consequently unacquainted with the various stages of diseases, whose professional name and credit rest principally upon the ignorance or indolence of their contemporaries and public credulity, must prove as strong “a preventive check” to population as any Malthonian or other statistical philosopher can desire ; by slaying annually its thousands ; not perhaps by the actual injury of remedies ; but in the end by procrastinating the interference of the regular chiro-physician (or practitioner theoretically and *practically* acquainted with diseases in *all* their stages,) till the period of cure is past, or until the enemy has taken fast hold of the constitution or part, and enabling him to revel on the very vitals of the unhappy victim, which of course must baffle all future remedial processes.

CATHARTICS OR PURGATIVES.

The medical attendant or chiro-physician, as described in the last section, being, then, sent for, should there be delay in his coming, administer an active *cathartic* ; ten or twelve grains of jalap combined with three or four grains of calomel, if they can be procured, and let this dose be repeated between every three and four hours, until it operate briskly. In almost every stage and every sort of fever, nothing, perhaps, is of greater moment than to preserve the whole of the alimentary canal free from accumulation of colluvies, &c. An emetic in the primary stages of fever, previous to the stage of excitement or re-action, has been known abruptly to check its progress, and the same purpose is not unfrequently accomplished, particularly in ephemeral affections of the febrile kind, by the employment of a brisk *cathartic* ; and if there were any method of cure that could, with justice, be substituted

for blood-letting, it would be cathartics. Medicines of this class employed by the ancient physicians consisted of a very rough list, and a very limited range. They made, however, very considerable use of them. But of late they were nearly neglected by some, and proscribed by others, in the fevers of this country, unattended with local inflammation. Dr. Hamilton of Edinburgh, author of "Observations on the Utility and Administration of Purgative Medicines in several Diseases," and the greater number of modern practitioners employ cathartics freely, without dread of that debility hitherto so much feared. The principle, however, on which these act, in fever, are not generally understood; and no doubt even the practice itself is very often inefficient from this cause. Dr. Hamilton seems to impute most of the salutary effects of cathartics in fever to the removal of irritable fœcal remains. But if this be correct, the clysters of Dr. Cullen would have answered nearly the same purpose, which it is well known they do not

It is highly probable, that they answer another and even more salutary effect, in renewing healthy secretion, and by removing fœcal collections, particularly from the small intestines, a more free and open descent is given to the blood through the abdominal aorta and its branches, and thus mechanically aids in the restoration of balance; the augmented secretion from the mucous membrane of the alimentary canal, must likewise greatly deplete the cœliac vascular system; but a very benign *modus operandi* of cathartics in fever, seems to have escaped the investigation of most physicians, though it be a very important one; which is the change from torpor of the intestines to an active peristaltic motion, whereby the blood that accumulates, and in some degree stagnates, in the hepatic circle, is drove forward, and the biliary, cœliac, and colonic secretions augmented. Another wholesome effect is produced by the sympathetic influence which the

internal surface of the alimentary canal performs on the cutaneous surface of the body ; because although drastic purging will arrest profuse perspiration, yet where torpor pervades both the internal and external surface of the body, a restoration of the functions of the former must contribute to the same event in the latter.

Cathartics are employed not only to clean the intestines in numerous morbid conditions and bring away worms, but the state of the alimentary organs having a marked influence upon the cerebral functions, they are likewise prescribed with the most beneficial effect in particular diseases of the head and eyes, such as vertigo, apoplexy, lethargy, ophthalmia, &c., for when the peristaltic motion, the gastric, and intestinal secretions are excited by cathartics, the head, which, from the singularity of its circulation, must suffer sanguineous congestion, is relieved almost instantly by the *change of balance*, by that means induced ; also they are particularly useful in tetanic and other convulsive diseases, such as in various cases of hysteria and chorea ; in some mesenteric diseases ; in cases of chlorosis and amenorrhœa ; in jaundice and other affections of the liver ; in dysentery ; in bilious fevers, and more especially in the ardent fever (yellow fever) of the hot climates ; and in some exanthemata, especially the confluent small-pox, measles, and scarlatina. It cannot therefore appear a matter of indifference, what cathartic medicines are made use of. Indeed experience teaches us, that much advantage may be obtained by attention to the specific effects of different kinds of purgatives, as some, *calomel*, for instance, besides acting as a common cathartic has probably a more general influence than any other ; it induces a degree of nausea in the stomach, possesses an exciting power well calculated to stimulate the sensibility of the intestines, which exciting power of mercury re-acts upon the viscera of the hypochondria, and thus emulges the biliary ducts and occasi-

ons a copious flow of bile into the intestines, dislodges scybalæ, or hard and dry excrements, and carries them off most effectually, corrects morbid secretions, and with small doses of antimonial powder, or of the tartrate of antimony, promotes not only purging but a tendency to perspiration; hence this combination is well suited in fevers to the stages of excitement.

With respect to mercury, when administered to affect the mouth for some time, it is very powerful in restoring health, if there be pain in the right side on pressure, or if there is yellowness of the skin. We know, that where the bile is deficient, it excites the secretion when given in small and repeated portions, and removes in an extraordinary manner, symptoms of nervous irritation, and various other constitutional derangements. Some, however, are very apt to decide that whenever the biliary system is deranged, mercury is the most sure remedy; but they seem to be unaware that the liver might be invaded with inflammation, chronic or acute, or indirectly disturbed by disordered states of the stomach or of the bowels, and the flow of the bile might thus be improperly retarded or accelerated; or that the liver may secrete more or less bile, which may be too acrid or defective in quality; or that the passions of the mind might disturb it in every possible way, and thus form a moral cause of disorder. From these circumstances being overlooked, or partially understood, there can be no doubt but that mercury is frequently exhibited where common purgatives would answer every purpose, that it is often exhibited where there is no indication for its employment, and that it is often exhibited to an injurious extent. In many of the before mentioned examples alkalies have proved remedial, and in some the mineral acids; in some exercise; in others quiet; and in some of these affections electricity has been found to be a direct remedy. In the first case, where inflammation existed, bleeding would be the remedy primarily in-

dicated. As it is very desirable to determine the proper cases for the exhibition of mercury, with a view to its effect upon the digestive organs, I shall in the course of this work relate some cases, which may serve as an important fact in forming our conclusions.

Castor oil operates in general with much certainty, and scarcely ever induces an exhausting catharsis; but it will do little more than clean the intestinal canal of that which already exists there. This viscid oil, containing an acrimonious resin, may be obnoxious to absorption throughout every part of the alimentary passages. Castor oil in the dose of an ounce frees the whole contents of the intestines by augmenting the peristaltic actions; as the oil passes through the body without any visible change, its stimulating contact must be more extensive and more certain than purgatives which are liable to absorption. Yet, notwithstanding this, I would recommend where we apprehend viscid colluvies or hardened fæces lurking in the interstices of the bowels, that a drastic purge should either precede or be given along with the castor oil, in case the latter should not sufficiently excite the peristaltic motion, and from its oily nature glide through the bowels without carrying with it the offending matter. Castor oil operates more powerfully when taken in its common state, its activity being much lessened by mixing it into an emulsion; it is more especially adapted to weak and delicate constitutions where more active purgatives might in some degree prove dangerous. Castor oil properly used seldom leaves either costive or relaxed bowels, besides it tends to allay tormina or tenesmus and every species of irritation about the rectum. But a facitious castor oil is said to be vended, consisting of scammony and an expressed vegetable oil, or the pure castor oil may become rancid from keeping, in either case griping or irritation may be produced by the use of these.

The *neutral or saline cathartics*, such as sulphate of

magnesia (Epsom salts), and the sulphate of soda (Glauber's salts), have a peculiar effect by exciting the exhalants on the inner coat of the bowels, evinced by copious *watery secretions* from the alimentary tube, during their operation; and are well adapted for phlethoric habits, as also for those with an inflammatory diathesis; yet they are not to be trusted to singly, and more especially in corpulent persons, because they may, though given day after day, leave a considerable quantity of scybalæ or other sordes in the arch of the colon, it will therefore be advisable to administer first a dose of stimulating cathartics. To vary the operation of cathartic medicines many causes contribute, such as the doses in which they are taken, the solid or diluted state in which they are administered, the existing condition of the patient, and the quantity of fluid drank before or during the catharsis. When neutral salts are given in full doses with a small quantity of fluid, they considerably excite the intestinal exhalants, and induce a flow of serous fluid, which is then abstracted from the mass of circulating blood. But when given with copious dilution, they seem to wash out the intestinal tube without scarcely lessening the quantity of blood, or injuring the bodily strength; perhaps the weaker solution of salts, from their very great attenuation are not only less irritating to the exhalants, but offensive to absorption, and therefore the whole of the fluid then drank passes hastily through the intestines. Half an ounce of Epsom salts dissolved in a pint of water, operates sooner, more copiously, and with less griping than an equal quantity of the same kind of salts dissolved in a quarter of a pint of water; and also half an ounce of Epsom salts dissolved in a pint of water, commonly operates sooner and more copiously than an ounce of the same sort of salts dissolved in a quarter of a pint of water. Besides, the dose of salts highly diluted does not lessen any part of the circulating nutriment, and when taken before breakfast

will not carry off the digested aliment, whilst full doses of neutral salts, not accompanied by copious dilution, are very exhausting and baneful, particularly to debilitated persons. In cases of emaciation connected with habitual foulness of the bowels, these largely diluted doses of neutral salts might be repeated frequently, even for many weeks with beneficial effect. In this manner, Cheltenham and other purgative mineral waters operate, and the general testimony in their favour prove their usefulness. Two drachms of sulphate of magnesia dissolved in a pint of warm water may be taken every second or third morning. These salts may be combined according as the circulating force is too languid or too violent. In particularly languid cases, chalybeates may be added with advantage, for instance, six grains of ammoniate of iron in each dose of salts. The iron increases the circulation of the blood, at the same time that it obviates the debilitating effects of the cathartic. On the contrary, in some febrile habits, antimony may be advantageously united with salts, viz. either fifteen drops of antimonial wine or four grains of antimonial powder may be administered with each or every alternate dose, and both these metallic salts will increase the purgative effect.

Cathartics sometimes operate as diaphoretics, and sometimes they prove diuretic ; and an unrelenting dry and hot skin often yields directly after a catharsis. Most of the saline cathartics which contain acids and alkalies generally operate upon the kidneys by presenting an uncommon proportion of extraneous salts to their excretory vessels. Such extraneous substances are more frequently carried off by urine in greater abundance to the volume of fluid, than that in which they had been previously contained in the mass of blood. Moreover, the administering mild laxative medicines, and saline purgatives, is often one of the most effectual means of lessening inflammation, for purging does not occasion so much weakness, nor is it so

lasting as bleeding, and, therefore, should seldom or never be omitted, even when bleeding may be considered improper. Saline purges will diminish the quantity of blood, in proportion as they increase the secretion from the intestinal arteries. They must therefore operate beneficially in the cure of local inflammation, much the same as bleeding does. A late eminent practitioner thought that purging lowered action without lessening strength, to which I readily subscribe, provided we do not carry it to such excess as to excite unusual secretion into the intestines. Again, independent of the benefit which the local inflammation derives from the proper administration of purgatives, the costiveness and heat which generally accompany the symptomatic fever, are also relieved in the same way.

The cathartic neutral salts are quite improper when the large intestines are foul or loaded with sordes, and in all acute diseases, particularly those affecting corpulent persons, should be avoided, until the sacculated bowels are previously well cleansed by stimulating cathartics, such as jalap or submuriate of mercury. In cases of great laxity of fibres, in some dropsical diseases, and whenever the digestive organs are impaired without an obvious connection of distempered bowels, the diluted neutral salts are very improper.

Magnesia frequently allays irritability of the stomach, especially when attended with bilious or sour watery vomitings, hence in many cases it may be advantageously conjoined with other aperients, and when followed by lemon juice, is generally a certain and powerful purgative. The combination of *magnesia* with manna, is frequently prescribed to young children with success, and the union of these two substances is often adapted to the acid state of their stomachs. But it often happens that their efficacy is greatly promoted by alterative doses of calomel and jalap where the stools are curdled. *Senna* is frequently

administered in conjunction with other cathartic drugs ; when given alone its activity is unsteady, and sometimes produces violent tormina.

Rhubarb is an astringent cathartic and acts principally upon the stomach and the upper portions of the small intestines. It is usually given to those whose bowels are weak and irritable, and subject to diarrhœa. When used to remove a sick head-ach, or ingesta, it will operate more effectually in the form of powder, and is necessary to be mixed at the time of its being taken ; when infused in watery menstrua, it must lose much of its activity. Its effect on the stomach is greatly promoted when mixed with ipecacuanha ; and with the stimulant aromatics, such as powdered cardamom seeds and ginger. Fifteen grains of rhubarb ; six grains of ipecacuanha ; and five grains of ginger, are usually sufficient for adult persons. Should sourness in the stomach exist, forty grains of calcined magnesia may be repeated every three hours until the acidity be corrected. In such cases little should be drank, as the excess of fluids favour the acid fermentation, and sugar or syrup ought to be avoided. Frequently, however, fluids, as a glass of cold, at other times warm, water, affords much relief by diluting the ingesta of the stomach.

Rhubarb, like jalap, when conjoined with calomel is very certain in its operation, and when given after it, (particularly rhubarb) has a tendency to remove the tenesmus and the mucous discharge, which it (calomel) frequently produces exhibited singly.

Jalap is one of the most powerful cathartics, and it is particularly suited to cleansing the lower bowels ; it appears to act by stimulating the peristaltic motions. It should not however be given alone, but administered in repeated doses mixed with an infusion of senna and neutral salts ; for in all acute disorders, where the complete clearing of the bowels is the leading indication,

jalap in combination with other purgatives is most to be depended on. When powerful and active cathartics are hastily required for the purpose of carrying off feculent accumulations, the combination of irritating cathartics is necessary. For example, one drachm of jalap; two drachms of manna; two scruples of supertartrate of potass (cream of tartar); and eight ounces of infusion of senna, made into a mixture. Of this three table spoonful should be taken every hour until the bowels are sufficiently cleared; which can be known only by the fæces ceasing to be offensive, or of an unnatural colour. Should the urgency of the symptoms not contra-indicate it, the exhibition of two or three grains of submuriate of mercury, six or eight hours before the beginning of this clearing purgative will very often be beneficial, more especially in all the cases of obstructed bile. This purging mixture, or any similar formula, given in full and reiterated doses, in quick succession, operates with more mildness than might be expected. The reason of its unruffling operation appears to me to be owing to its at once acting upon the whole alimentary canal, for as soon as it effects the pylorus of the stomach and superior portion of the upper intestines every part is immediately put in motion; if half a drachm of jalap and five grains of submuriate of mercury be given to an adult, they act in the same manner, full purging is effected, and the bowels are completely evacuated of their contents; but when an insufficient dose is given it is apt to act partially, and in that case much griping is generally produced, without the required good effect. Jalap is, however, an exhausting cathartic, and its use cannot be long continued, as it appears to weaken the digestive power of the stomach.

In consequence of the importance of the functions of the liver in the animal economy, and depraved effects which result from any derangement or obstruction of it in febrile commotion, it is apparent, nay experience

evinces, that into association of cathartic medicines in fever, those of a cholagogue power should generally enter. It has therefore been found not only in this but in other countries, that powdered jalap and submuriate of mercury formed a composition excellently adapted to all the intentions before mentioned, and has been proved by the writings of many eminent practitioners ; yet I am of opinion it is the custom to assign too much importance to the liver, and that many of those disorders which are attributed to derangement of the hepatic function, are really more generally in the digestive organs ; but that the energetic and continued action of cathartic medicines upon the stomach and intestines, is propagated to the liver, gall-bladder, and vena portæ, and determines a degree of activity which is frequently of the greatest utility in affections which also depend upon a state of sluggishness and stagnation in these organs. But physicians, especially those of the liver school of the Metropolis, who relentlessly pursue the hepatic system, which is with them every thing, the Pandora's box, seem to forget that the stomach and intestinal canal have important secretions of their own independent of that from the liver. Disorders of the stomach, and of the biliary organ, likewise of the upper portions of the intestines are seldom restricted to those particular parts ; they frequently depend on obstructions in the lower bowels, or cause in their turn obstructions in those viscera. The stomach must be disordered when the functions of the liver are deranged. The state of the mind, the condition of the sensorium, and every part of the nervous system affect the stomach and bowels, and render them infinitely more or less susceptible of catharsis. So does the state of the sensorium and the passions affect the secretions and the discharge of the liver. Violent and sudden passions often induce a diarrhoea ; but grief and all the depressing passions, as well as bodily pain are productive of torpid bowels, and require

to be carefully watched, as the neglect of these evacuations frequently tend to serious complaints both mental and corporeal. It is too much the fashion to view the diseases of organs in a manner too insulated, and not sufficiently comprehensive ; and to forget how essential to the prognosis or treatment of any case of organic lesion, is an accurate knowledge of the state of the other principal viscera. During some slight and seemingly yielding affection of the liver or intestinal canal, and while the attention of the practitioner is exclusively directed to the abdominal region, a violent attack in some unguarded quarter, perhaps the brain or heart, will sometimes occur, and abruptly destroy the patient ; or incurable mischief may be going on in the kidney, when, to the superficial observer, the stomach alone exhibits signs of derangement, or *vice versa*. Also, inflammation of the internal membrane of the lower end of the rectum and anus, and not unfrequently excoriation or very superficial ulceration, which take place without the distension of the hæmorrhoidal veins constituting piles, are often mistaken by the ignorant for piles ; or when they sympathetically derange the digestive organs, or cause an irregularity of the alvine discharges, are often mistaken for some organic disease of the stomach or of the liver. Again, pulmonary disease is often followed by abdominal, and *vice versa* ; but affection of the digestive organs much more frequently induces the former than this the latter. Desault of Bordeaux, remarked, nearly a century ago, that in phthisis, the liver is often indurated and painful. Affections of the lungs, trachea, and liver, are frequently combined. All these circumstances most materially affect the administration of cathartic medicines, and prove that the eye of the physician, or whoever undertakes to treat diseases, like that of the commander on the field of battle, ought to be every where, or he will be taken, as before mentioned, by surprise in some unprotected quarter, and utterly defeated

when dreaming of nothing but success.

Purgatives are of remarkable utility in all febrile and spasmodic affections of children, as a very disordered condition of the digestive organs is a cause or consequence of these in most instances. Although particularly useful in the same diseases of adults, the benefit is not so great nor so general: but perhaps greater in women than in men.

Again, in some cases of torpor and spasmodic affections, cathartics may be advantageously employed to promote the circulation, by removing obstructions.

It is also evident that purging, by rousing the torpid excitability and circulation of the abdominal viscera, determines the blood through the different branches of the aorta which were before overloaded or choaked up, of course removes congestion in the head, and restores strength, by relieving the sensorium, instead of adding to the pre-existing debility, which was so greatly feared by the Cullenians and Brunonians, and indeed still fetters the mind of very many practitioners. Hence the operation of cathartics exactly accords with, and explains the essential principle ever to be kept in view in fever,—*a restoration of equilibrium in the balance of the excitability and circulation.*

Aloes and similar drugs exert their influence most on the lower part of the intestines, particularly when prescribed in the form of a pill, and act by depleting the bowels without lessening the animal vigour.

Cathartics then, properly administered, are capable of producing important changes throughout the system, and are extensively employed in the practice of physic; it will, however, often be found a point of much importance, to determine whether purgatives ought to precede or be employed after other remedies; for instance, in cases of foulness of the alimentary passages, accompanied with an alarming plenitude of blood, it may then be consider-

ed whether bleeding should take place before or after cathartics ; the life of the patient will greatly depend on a prudent and skilful decision in all such cases. Corpulent persons, especially beyond the middle age, attacked by carbuncle, inflamed parts which would soon take on mortification, or threatening apoplexy, may absolutely be lost before purgatives can remove the offending matter, unless the sanguiferous system be previously enough unloaded. In no disease is blood-letting more necessary than in erysipelas, particularly when it attacks the face and scalp. But should an erysipelatous gangrene originate from a surfeit, in a cachectic constitution, it will then be very essential to empty the alimentary passages and correct fermentations in the stomach and bowels ; and the vascular system should be left to the indireet operation of brisk purgative depletion, temperance, and suitable corrigents, such as antacids when acidity pervades the stomach, or the mineral acids when fermentation prevails. As very few inflammatory disorders entirely depend upon either general or local plethora, or an excitement of the sanguiferous system alone, physicians should particularly enquire into the other sources of the disorder, and seek out remedies that are more immediately adapted, or at least absolutely requisite auxiliaries to remove the remoter causes of inflammation. Fermented or unduly retained aliment usually either precedes or follows all inflammatory diseases. Under such circumstances the blood is generally supplied with noxious materials ; and therefore cathartics, diet judiciously selected, or total abstinence, are sometimes of as much importance as bleeding ; indeed complete abstinence for two or three days is frequently the most effectual remedy. There have been instances, particularly in aged and corpulent persons, where a repetition of purges for four or five days successively have been scarcely sufficient to clear away the accumulated fæces and indigestible substances.

The salutary operation of nature in expelling the excrementitious humours, in order to a due regulation of health, should take place at least once in twenty-four hours. Dr. Hamilton, who has been before mentioned, attributes the origin of many diseases to a deranged and defective state of the *primæ viæ*, and he assures us that the want of sufficient and regular alvine evacuations induces to feculent odour of the breath, disordered stomach, depraved appetite, an accumulation of sordes, and impaired digestion, which preclude a sufficient supply of nourishment, and that too, sometimes in young persons, at a period of growth when it is most wanted. This supposition may certainly be supported from the practical experience of very many instances of the kind; but it has become, unfortunately, since the promulgation of his excellent book, too prevalent too impute, without due discrimination, a long list of disorders as affections resulting from a disordered state of the digestive organs, or chylopoetic viscera, many of which, there can be no doubt, arise from other causes; and that his practice, if carried to the same extent to which it has been enforced by many, might even in some degree be condemned in all diseases whatever; yet, nevertheless, for the principle of his practice I am much disposed to contend, the contemplation of which has taught practitioners to think and to act rightly in numerous the most important disorders, and particularly in fevers, in which they materially deviate from the erroneous opinions, and the dangerous practice of our ancestors. When Surgeon Abernethy pointed out to the faculty the constitutional origin of local diseases, he established the most possible beneficial principles. In offering for our consideration the relief of local diseases by the improvement of the general health, he was naturally led to enquire into the physiology of these derangements of the constitution, by which it becomes fit for the reception of morbid impressions. These were chiefly found to consist

in certain nervous irritations, whereby, though they obtain no name and no place in nosological arrangements, the system notwithstanding suffers very materially and universally. Mr. Abernethy affixed their origin to a disorder of the digestive organs. The truth of these opinions, after being differently misrepresented and misunderstood, is now I believe pretty generally allowed, and exerts a forcible influence not only upon surgical conduct, but also upon medical practice in general. Dr. Hamilton, in his *Observations on the Utility and Administration of Purgative Medicines*, and Mr. Abernethy, in that part of his work, which notices the *Constitutional Origin and Treatment of Local Diseases*, evidently agree in principle; and the former may have been right, when in speculation he extended the same principle beyond the limits within which it was at first included, and when he shewed that many disorders, independent of anomalous ones of the nervous system, were either caused or aggravated by an imperfection of the digestive functions. But his practice, however well suited to acute diseases, has by experience, in those of a chronic and cachectic nature, been found wrong; for instead of bringing on the healthy actions of the bowels by the gradual and mild impression of what are usually termed alterative aperients, he employed for the same purpose repeated doses of the most powerful stimulating purgatives, in order to support a violent and uninterrupted irritation.

It must be evident from the foregoing general statement of cathartics and the diseases in which they are used, that a combination of purgative medicines of different kinds will often be found expedient, and that the skill and judgment of the practitioner are particularly to be exerted in order to form those suitable compounds which are required by the varying symptoms. For instance, in acute febrile diseases, as has already been shewn in the second stage of typhus, or in spasmodic and convulsive

disorders, such as St. Vitus's dance, the locked jaw, &c., cathartics to keep up a strong and uninterrupted irritation, as recommended by Dr. Hamilton, would be highly proper, whereas in chronic diseases, such as of the liver combined with those of the lungs, the mild alterative aperients, as advised by Mr. Abernethy, would be the most proper. Unless these circumstances be judiciously discriminated, and strictly attended to, the treatment of course will seldom be successful. If a hypercathasis, or excessive purging from medicine, be at any time incidentally induced, its ruffling and exhausting effects are best counteracted by a dose of opium.

It has been generally highly recommended to administer purgatives in the morning, or during the early part of the day, in order that the bowels be opened before bed-time, and the patient through the night have a respite from their operation. I cannot, however, wholly subscribe to this recommendation. It is assuredly of much consequence to get the bowels freely moved in the evening; but it is at this period the exacerbation is usually present; it should therefore not be suffered to go uninterrupted: on the contrary, every means should be adopted in order to diminish its intensity and duration; and this may frequently be effected by freely using at this time, or during the night, both the tepid affusions and cathartics. The full operation of purgatives sometimes reduces the morbid heat of the skin and impedes the morbid impetus of the pulse, almost as effectually as the affusion of cold water or phlebotomy,—results which certainly indicate, that their action extends beyond the mere removal of fæcal matter from the intestinal tube. It will be found, from the above treatment being pursued, that the patient will most commonly fall into a quiet sleep about the period of the morning remission; but if it be omitted, he commonly passes a watchful or uneasy night, and probably is restless the whole of the following day.

It is not, however, by these observations meant that purgatives should obviate the use of the lancet, for we shall find them deficient in many particulars if compared with the utility of venesection. They require some time for their full operation; and the patient may frequently be in a state of convalescence from the employment of the lancet, even before a proper system of purgation could be brought to act on the bowels. But it is a practice too frequent to exhibit scarcely any medical aid during the night, in most idiopathic fevers. Sure it is, however, in some cases, it may be very dangerous, if not fatal to the patient, to lose so much time; for should the excitement run high, which is often the case at this period, and not be reduced, it may give rise to topical inflammations of the viscera which no care can afterwards remove.

The foregoing remarks will, I believe, be allowed to be applicable to all fevers. It remains, then, only to recapitulate, that calomel, antimony, jalap, rhubarb, and the like, with neutral salts occasionally, are most proper in the first and second stages, and that, with some exceptions, aloes and the mildest aperients are most proper for the last stages of typhus.

In the *first* or cold and oppressed stage of typhus, as well as in other febrile diseases, a simple *laxative* will effect little, whereas an active *purgative* produces the most unequivocal benefit; another demonstrative proof, that the consecutive efficacy is not implicitly from the mechanical dislodgement of the fæccs. At the onset and in the whole course of typhus, it not unfrequently happens, that the bowels are in a seemingly lax condition; but on a careful inspection of the evacuations, they are scarcely ever found free from being very foetid and mud coloured, or slimy, chopped, and scybalous or dry and hard; hence cathartics are indispensably necessary, to remove the alvine irritation, of the existence of which such preternatural discharges afford the most powerful presumption.

During the whole course of the *second* stage of typhus, or that of excitement, purgatives should be so administered as to produce, at least, in every twenty-four hours, four or five copious motions; and as the bowels are, for the most part, then unnaturally torpid, even although sometimes apparently lax, tolerably full doses of medicine ought to be exhibited, that no time may be lost in the repetition of small and ineffectual ones.

Third stage of typhus, or that which follows the excitement. As to the danger said to arise from the exhibition of cathartics, I look upon that, especially in the earliest stages, as next to nothing, and would advise any member of the old school, who may still be inclined to be sceptical on this subject, to recollect it was said by their predecessor, Boerhaave, and repeated by their contemporay, Dr. Hamilton, in his valuable publication, that the strength is not easily reduced by depletions, in the beginning of febrile disorders; and if we apply this remark more particularly to those procured by cathartics, it must be admitted to be perfectly correct, the weakness caused by their repeated operation being infinitely less than might have been previously imagined, and immaterial when compared to the general good which they effect. But in this, the third stage, where the vital powers of the system are certainly reduced, evacuations in general should be avoided, unless when the brain has become affected from the neglect of purgatives in the earlier stage, in which case calomel and jalap with stimulating enemata are highly beneficial, the patient being supported, if necessary, during the operation by moderate allowances of good wine. The neglect of cathartics in the primary stages also often causes the patient to pass frequent small foetid stools, with which slime and blood are sometimes mixed; yet such an occurrence certainly does not prohibit a frequent, but rather pressingly denotes the absolute necessity of their exhibition.

TEPID OR WARM BATH.

After the bowels have been plentifully evacuated in the first stage of typhus by the powders before prescribed, under the respective head of cathartics, (page 87,) the patient should be put into a warm bath at 96 or 97 degrees of temperature, for about a quarter of an hour, then dried, and immediately put to bed, and covered with a proper quantity of bed-clothes, rather few than otherwise, so as not to induce a sense of chilliness, or more than may be necessary in the succeeding state of the disease, that is to say, when re-action, or the hot stage, will be more effectually developed, and when more or less blood should be drawn away; of this, however, as I have elsewhere remarked, no exact calculation can be formed of the quantity; that can only be determined by the medical attendant, hence the absolute necessity of his being qualified to decide with judgment; and I must here request the reader to note with peculiar attention, that the blood-letting is to be performed with reference to symptoms not yet unravelled, hence it is not what the present state may require, but the state and stage of the fever that are opening upon us, which constitutes the

SECOND STAGE OF TYPHUS.

The first stage sometimes comes on and reveals itself with rapidity; it is generally, however, more insidious in its approaches, and occupies, as described under the head of Miss A., (page 67) from first to last a period of two or three days; when, after various irregular demonstrations of re-action, it is followed by the present stage, (the second) or that of excitement, in which there is a perfect development of the fever. The morbid actions of the nervous system, by acting on the actions of the san-

guiferous system, produce the aberrations or broken balance of these two systems. The dejection of mind, &c, which occurs in the first stage is occasioned by the suspension of the sensorial and nervous powers, and the consequent lessened and deranged circulation, while the tone and velocity of the circulation is now preternaturally increased by the agency of nervous energy; and the pulse accordingly becomes comparatively expansive, thrilly, and resisting; at least it is greatly different from the variable, confined, inelastic pulse of the former stage, and from the uniform, free, and smoothly flowing one of health. The cheeks are flushed; the eyes heavy; and the lips parched. The respiration is quick; the skin almost invariably dry; the heat universally diffused, and steadily above the common point. *The time is now fully arrived when more or less blood should be abstracted.* I must, however, before I proceed further on this subject, make a small but necessary digression by introducing some observations which may be considered of much importance,

In these scrutinising days of investigation, the lancet has already greatly dispelled the clouds of prejudice, which formerly existed; and bleeding at present is justly considered as the chief remedy, in symptomatic, as well as in all the more violent and fatal idiopathic fevers. But it will be seen that at every step, we have difficulties to encounter, which much experience and nice observation only can surmount. Copious bleedings will sometimes be absolutely necessary, yet we must at all times regulate the quantity to the constitution of the patient, the stage and violence of the disease, and the vital importance of the organ affected; and upon the whole, I by no means wish to encourage large or promiscuous bleeding; it is, I believe, the common practice of the ignorant who are apt to catch at the improvements of the day, without knowing how to apply them. A writer states in a report of typhus fever, which prevailed in the village of Taplow;

in Buckinghamshire, that the confidence “with which he “had pursued the bleeding system of Drs. Armstrong and “Bateman was greatly shaken by further experience.” He continued, however, to institute one full bleeding, from the effects of which he felt the strongest objection to venture on a second; and it was only in some few cases, where leeches to the temples did not remove the pain of the head, and every symptom of inflammatory excitement that he had recourse to a further small abstraction of blood from the arm. He admits that the patient who complained of pain and uneasiness in the head, experienced great, and oftentimes complete relief, from local or general bleeding. That the brain is primarily and chiefly affected in this disease, he is convinced; “and therefore,” says he, “it is of the greatest “importance that it should be relieved, as speedily as “possible, by bleeding;” otherwise irremediable injury may ensue, and that general affection of the nervous system which establishes typhus fever. I believe it may be of the utmost utility to specify in this place, that the time for bleeding in the *early* stage of fever ought to be an object of great attention. At this period of the disease few practitioners are well acquainted with the effects of bleeding. It should be early in respect to the accession of the fever, the pulse though small should, in many instances, be no objection to free bleeding; but the patient certainly should not be bled during the chilly or shivering state which ushers in the fever. The operation must be deferred till the commencement of the heat, procured either by artificial means, or by the natural re-action of the system. Inattention to these matters have frequently produced great mischief which is charged on the remedy, whereas it ought to be placed to the account of the ill judged period of its application. I am, however, an advocate that in every case of fever a sufficient quantity of blood be extracted, rather *before* the stage of excitement

completely unfolds itself, that will enable the blood-vessels of every part to admit the hurried current to pass freely through them without obstruction. It is obvious that in some persons, little will be required to accomplish the end; in others particularly those of a full habit, two or even more bleedings may be required. I have bled some hundreds of patients, and have found in many cases all the symptoms of typhus relieved by the abstraction of from eight to ten ounces of blood, whereas in others I have found it necessary to take away twenty, thirty, or even more than forty ounces. What may be only a full bleeding to one person and no more than sufficient to remove the disease, might produce in another a train of very unpleasant events, even ultimately the loss of vitality.

It appears to me that the gentleman before mentioned, who writes on the Taplow fever, like many others, does not clearly comprehend the practice of Drs. Armstrong and Bateman, otherwise the confidence with which he pursued it would not have been shaken. Discrimination in practice is every thing. To institute a copious bleeding in every case of fever, or of typhus, must lead to the most injurious effects. Dr. Armstrong says, “with respect to *simple inflammations of the viscera*, or “other important parts, little more will be required than “to shew in what their treatment differs from those complicated with an infectious fever, such as typhus. The “principal difference in the curative plan lies in this,— “that in simple inflammations depletion may be carried “considerably further in the outset, though it ought to be “regulated by the same rules in the advanced stages, “when universal collapse is approaching, or has actually “taken place.” (page 180). “Two cases of abdominal “inflammation lately came under my care, in which the “symptoms were nearly alike. The subject of one of “them was a robust man, who on the first day of the at-

“tack was bled to the amount of twenty-five ounces,
 “which produced syncope, and for a time apparently
 “arrested the inflammation; but it returned on the fol-
 “lowing day, when about twenty-five additional ounces
 “were drawn, and with the same effects as before. On
 “the third day, however, the symptoms of abdominal
 “inflammation again became urgent, and forty ounces of
 “blood were now taken away, before faintness occurred:
 “but this last bleeding was effectual, and the patient re-
 “covered very well though slowly on account of the very
 “copious depletion. The subject of the other case was
 “a young lady, neither remarkable for strength nor deli-
 “cacy. Soon after the first attack, eight ounces of blood
 “were taken away, which produced syncope, and a mark-
 “ed remission of all the symptoms; yet on the following
 “morning, there was an obvious return of the abdominal
 “inflammation, for which about eight ounces more were
 “abstracted. This second bleeding caused a long conti-
 “nued faintness, but on recovering from it, the patient
 “expressed herself completely relieved, and from that
 “time rapidly regained her strength and health. Now
 “here were two instances of an equally alarming nature,
 “one of which required ninety ounces of blood to be
 “drawn for its removal, whereas the other only required
 “sixteen. It therefore appears evident, that the imposi-
 “tion of any arbitrary measure is not to be relied on in
 “inflammatory diseases, since the practitioner should be
 “guided by the effect rather than by the amount of the
 “blood abstracted: and surely if we can make a moderate
 “quantity completely effectual, it is all the better, as
 “thereby the strength of the patient will be proportion-
 “ably saved. Yet, on the other hand, we must not be
 “turned from our purpose by unfounded fears about the
 “danger of decided depletion, in cases of extraordinary
 “severity. Half measures are always to be deprecated in
 “the commencement of highly sthenic disorders; for

“even if they should break the force of the inflammation, which is hardly to be expected, they will generally leave a subdued degree of it, and thus indirectly lead to chronic derangements of structure, or to serous effusions, if such membranes as the pleura and peritonæum be affected.” (page 182).

In simple typhus, in which the febrile excitement is completely developed without topical inflammation, bleeding may only be necessary so far as to relieve the blood-vessels of the hurried circulation; but it is, as Dr. Armstrong observes, “in the acute species of inflammation, sometimes commencing on the first, second, or third day of the second stage of typhus, for which, provided it be seated in a part of vital importance, copious venesection is indispensable,” He adds, “it must never be forgotten, that general blood-letting is only advantageous or even admissible in the beginning or acme of the acute inflammation;” (the quantity drawn by Dr. A. has varied from eight to forty ounces; but the usual quantity varies between sixteen to thirty ounces) “because when it has existed for a few days, it is almost invariably combined with universal exhaustion, and venesection will then hardly ever remove it, but contribute to precipitate the patient to the grave by its powerful impression upon the whole system.” (page 135). “In such instances it may be assumed as a principle, that local is preferable to general blood-letting, and in conjunction with blisters and purgatives it will sometimes surpass the expectations of the practitioner.” (page 136). “There are circumstances which will even justify the simultaneous employment of local blood-letting and diffusible stimulants in typhus, as for example, when the stage of collapse approaches, and the head and chest, from the previous one of excitement, have become oppressed with an engorgement of blood, which is rapidly overpowering the vital energy.” (page 137).

Dr. Armstrong gives us a very clear notion of what he designates *congestive* typhus, in which the hot stage is not at all, or only imperfectly developed, and in which, simultaneous signs of congestion in one or more of the internal organs, are evident. The Doctor states that some allusions to this variety of typhus may be observed in the works of the ancients, particularly those of Hippocrates, under the names of *lypyria* and *epiala*. (page 60). In general, however, its nature does not seem to have been much attended to, either by ancient or modern authors, except Dr. John Clarke and Dr. Robert Jackson, the latter of whom more especially, according to Dr. Armstrong, surpassed his predecessors in explaining its nature. “The attacks of the most dangerous forms of the congestive typhus are generally sudden, and marked by an overpowering lassitude; feebleness of the lower limbs, deep pain, giddiness or sense of weight in the encephalon, a dingy pallidness of the face, anxious breathing, damp, relaxed, or dry withered skin, and those peculiar conditions of temperature which have been noticed above.—(i. e. partial heats of some portions of the body, while others, especially the extremities, remain cold, &c.). The pulse is low, struggling, and variable; the stomach irritable; frequently there is an inability from the first to hold up the head, and the mind is more often affected with dulness, apprehension, or confusion than with delirium. The whole appearance of the sick impresses the attentive practitioner with the idea that the system in general, and the brain in particular, are oppressed by some extraordinary load. Both the manner and look of the patients undergo early and great alterations; sometimes they slowly drawl out their words, or utter them in a hasty and yet imperfect mode, like people who slightly stammer when embarrassed. They not unfrequently seem as if stunned by a blow, half drunk, or lost in a reverie, and at times have the be-

“wilder aspect of persons suffering under the first shock
 “of an overwhelming misfortune. The eye is occasion-
 “ally glary and vacant, without redness ; but at other
 “times it is heavy, watery, and streaked with blood, as if
 “from intoxication, or want of sleep. At the commence-
 “ment the pulse is often less altered as to frequency than
 “might reasonably be expected, yet in general it becomes
 “very rapid towards the close ; the tongue is usually little
 “altered in the first stage, but in the last it is frequently
 “rough, foul, and brown ; the bowels are mostly very
 “torpid in the beginning, and the stools procured dark
 “and scanty, whereas in the advanced stage the bowels
 “are generally loose, and the stools copious and involun-
 “tary. Eructations are not uncommon at all times, and
 “the epigastric region is often much inflated. On account
 “of the general torpor, the secretions are diminished or
 “suppressed, and, as justly remarked by Dr. R. Jackson,
 “the skin is often in that peculiar state, that if blisters be
 “applied, they either do not act at all, or so defectively,
 “as to leave an appearance as if the part had been slight-
 “ly seared by a hot iron. Petechiæ in general appear
 “earlier in these than in any other varieties of typhus,
 “and in the last stage there are sometimes gangrenous
 “spots on the extremities, oozings of blood from the
 “mouth and nostrils, and hæmorrhage from the bowels.”
 (page 68-9).

Should the stupor, delirium, and oppression continue
 or increase, if the breathing becomes more anxious,
 the pulse weaker and quicker, the skin colder, and the
 stools and urine pass off involuntarily, death will speedily
 ensue ; but the prognosis will be favourable, if the reverse
 of these symptoms take place. From the great tendency,
 however, to relapse, a cautious prognosis should be given.
 “If,” says Dr. Armstrong, “the congestive variety of ty-
 “phus does not comprehend the different characters of
 “what some authors have been pleased to call the low

“malignant contagious fever of this country, I profess myself incompetent to understand their meaning, unless their description be considered as likewise applicable to the last stages of the simple and inflammatory typhus.” (page 225). The debility in this variety of fever, our author considers as more *apparent* than *real*; and he attempts to refute the usual opinion respecting the impropriety of blood-letting in this form of the disease. But he limits this practice to the first stage only of the attack, and the quantity drawn must be regulated by the effects produced. Sometimes eight or ten ounces will be sufficient; at other times twenty or more will be requisite to “relieve the topical engorgements, and put the general circulation into full play.” This ought perhaps to be the object of blood-letting, in every instance, and will explain its effects, namely, to adapt the *moles movenda to the moving power*. Dr. Armstrong justly remarks, that the blood will sometimes flow with great difficulty, or not at all, when the vein is first opened; but when a few ounces have been drawn, it usually flows with greater freedom, and becomes of a brighter colour. In such cases, where the head is particularly affected, it will perhaps be proper to open the temporal artery. The pulse generally rises under, or immediately after blood-letting, but sometimes continues oppressed or even weaker than before; in which case the warm bath, and frictions with warm spirits and oil, with a little warm wine and water, are recommended. These means must be applied promptly, and followed up by purgatives, particularly calomel and jalap. The specific effects also of mercury are recommended to be produced, if possible, by exhibiting the calomel in large doses. The moderate use also of diffusible stimuli will be generally necessary. In the advanced stages of this form of fever, when general relaxation has occurred, “venesection is certain destruction.” Dr. Armstrong says, even on the second day it may sometimes be inadmissible.

“The blood, in such cases, is black and dissolved, so
 “that when drawn it never coagulates, but continues a
 “fluid gore in the vessel. Any approach to this state of
 “the blood, such as inky petechiæ, or dark oozing from
 “the mouth and nostrils, with a weak, quick, thready pulse,
 “always prove that the stage of collapse is at hand, and
 “should make the professional attendant pause before he
 “advances a step forward in the treatment. Depletion is
 “then certainly out of the question, and the judicious use
 “of diffusible stimuli, calomel and opium, together with
 “blisters, and free ventilation, are the only means to which
 “we can prudently resort at such a momentous crisis.
 “Sometimes in the last stage of the highly congestive ty-
 “phus, an appearance of re-action takes place a few hours
 “before death. The greater part of the surface becomes
 “of a warm glow, and is covered with perspiration; the
 “pulse rises, and frequently, on a slight pressure, feels full,
 “bounding, and strong; but it is only a false semblance of
 “fulness and strength, such as may be often observed to-
 “wards the close of apoplexy; and therefore it should not
 “deceive the practitioner, since the smallest bleeding would
 “soon sink it entirely. It is at all times most painful to
 “our feelings, and humiliating to our pride, *to be consul-*
 “*ted in the last stage of highly acute diseases, where the*
 “*proper measures have been neglected in the first; on such*
 “*occasions, it is too often contrary to the nature of things*
 “*to expect that any human means should be available.*”
 (page 244-5.) The milder forms of congestive typhus re-
 quire a similar but less powerful plan than that just de-
 livered.

With these very judicious observations of Dr. Arm-
 strong respecting proper measures being neglected in the
 first instance, I most cordially agree as already mention-
 ed at page 87, &c. Although on the whole I am fully
 persuaded that no man has done greater service to the
 medical practice of his country than he has, by his

having placed in a much clearer light the advantages to be derived from the free use of evacuations, and the great obscurity and uncertainty in which the doctrine of debility is necessarily involved, yet I cannot entirely agree with him on the subject of endeavouring to produce syncope at the first bleeding. "When the presence," says the Doctor, "of an acute inflammation in typhus imperiously calls for venesection, the first operation should be made as effectual as possible. The change which a temporary suspension of animation produces, is often strikingly beneficial in phlogistic diseases. Fully satisfied of this, it has long been my practice to order patients, labouring under acute inflammations of the viscera, to be bled until some faintness supervened, that a complete syncope may be insured after the blood has been restrained. But as, in the ordinary manner of performing venesection, syncope can only be caused by very copious depletion, it is a desideratum in the treatment of inflammatory typhus, to induce it with as little loss of blood as possible; and this may be best accomplished by bleeding from a large orifice, the patient standing, properly supported, erect upon the feet;—for ten, twelve, fourteen, or sixteen ounces taken away in that position frequently have the desired effect, under all the forms of the inflammatory typhus. When there are obstacles in the way, to prevent the performance of venesection in the above manner, it may be done while the patient is placed on the breech, with the trunk perfectly erect, for even in that posture, faintness will come on much sooner, and consequently with a smaller loss of blood, than when the body is recumbent. Or the vessel may be opened as the patient lies flat upon his back, and about five or six ounces allowed to flow, when his trunk should be suddenly elevated to a right angle with his lower extremities which will often cause an immediate degree of sickness, and soon lead to the desired syncope." (page 139).

Respecting the mode of drawing blood, it must be noticed in the first place, that, as its beneficial effects are most frequently in direct proportion to the quantity taken, this should ever be as free as the indications will allow whilst flowing. Therefore the practice of drawing away blood in the erect or sitting posture, as recommended by Dr. Armstrong, ought in my opinion, to be particularly avoided when the vascular system is full and syncope easily produced; because in this case syncope can be of no service in arresting the febrile symptoms, or of relieving local affections and it is by the *quantity* of blood abstracted, infinitely more than the method in which it is taken away, that relief is to be expected; syncope must therefore, although in some cases useful, when it comes on too early be highly injurious, by preventing a proper quantity of blood from being extracted, and of course from a due impression being made upon the system, and the morbid concatenation under which it is then labouring. When, however, more than one blood-letting is necessary, or where there is rather a quickened action of the circulating system than actual plethora, producing *ad deliquium* with the smallest loss of blood possible, may be highly compatible with Dr. Armstrong's views.

Independently of these, there are other important circumstances which powerfully influence our practice in producing syncope, and Mr. Sandwith, in his "Observations in Medicine and Surgery," observes that there is "a remarkable difference in the power of resisting the lancet in the several tissues of the body when inflamed. Some inflammations are cured by the loss of ounces of blood, while others require as many pounds; and between these extreme points the gradations are numerous." He further notices, the mucous and serous membranes being so differently circumstanced under inflammatory irritation, as to the required and permissible measure of depletion, an important rule of practice is de-

ducible from the fact, which is, *in clearly marked* cases of inflammation of the mucous membranes, to take blood from the patient while upright, so as to accomplish the resolution of the disease with the least possible loss of vital power. On the contrary, when the tissue affected is serous membrane, enveloping large viscera and lining large cavities, “we must,” says Mr. Sandwith, “produce actual debility, and that very soon. *Our patients should be bled in a horizontal posture, in order that a large volume of blood may be abstracted before a disposition to syncope is produced.*”

“Nor does the treatment of inflammation of the ligamentous coverings of the joints (acute rheumatism) constitute an exception to this rule.” I have already given my opinion of the nature of rheumatism, and for a long time have been in the habit of employing in its acute stage, early venesection, taking away from sixteen to twenty ounces of blood, then with calomel and jalap, and occasionally a cupful of a weak solution of neutral salts, purging the patient briskly for about two days, and afterwards saturating, if necessary, the system with calomel, conjoined with sufficient doses of the compound powder of ipecacuanha or of opium and antimony to alleviate pain, and elicit a very gentle moisture upon the skin. For some months past I have exhibited the colchicum after bleeding and purging in acute rheumatism, and by a judicious and well-timed combination of these remedies, a mode of practice may be formed very superior to any other plan. “It is,” Mr. Sandwith observes, “the opinion of many of the moderns, that enlightened practitioners, Dr. Scudamore, among the number, that moderate depletion prevents the frequently deplorable consequences of rheumatic fever. ‘A degeneracy into chronic symptoms,’ says the Doctor, ‘is in no way so powerfully promoted, as by an intemperate employment of the lancet.’ That relapses, chronic rheumatism, de-

“crepitude, and a broken constitution, arise from the entire neglect of blood-letting, is proved by the case related in the dissections; and indeed these evils are the natural effects of protracted inflammation of ligamentous parts. The opposite opinion, that they have their origin in large depletions, is unsupported by the evidence of facts, and, as far as my observation extends, is contrary to experience. My success in the treatment of rheumatic fever, in the first years of my practice, was unsatisfactory. Deterred by unfounded apprehensions, I did not use the lancet with freedom; and my patients had tedious recoveries and frequent relapses. Since I have adopted the rule under consideration, none of the ills predicted by Dr. Scudamore have occurred, the disease has yielded as soon as any other acute disease, and my patients have as speedily recovered from the debility induced by the loss of blood.” Mr. Sandwith’s opinion on rheumatism may be supported by a reference to the experience of many eminent practitioners, but he may be by some considered presumptive in writing on what are called medical diseases, and deviating in sentiment with Dr. Scudamore.

Mr. Sandwith also remarks, that in every species of inflammation it is necessary “to bleed in quick succession;” and unless we speedily repeat our bleedings, we often actually increase the violence of the disease, and convert what was mere congestion into positive inflammation. He therefore enforces, as a practical maxim, the following position: “*Whenever an inflammation is not cured by the first bleeding, the operation should be repeated every two, four, or six hours, until it is.*” He says, fears of dropsy from large depletion are unfounded; morbid anatomy has shewn hydropic accumulation to be one of the consequences of inflammation.

I am, however, fully persuaded, as before stated, that fever is most certainly arrested when the bleeding is not

performed till the stage of excitement is, or nearly developed, which might not take place until the third or fourth day after the commencement of the disease. But in this particular the practitioner must be guided by the suddenness of the attack, &c., for there is great diversity in different cases as to the time when the symptoms supervene, which call most urgently for the use of the lancet. I have at present a gentleman under my care who is just recovering from a most violent attack of fever. He had felt rather unwell during the day. About four o'clock in the afternoon a strong sensation of cold and shivering came on, which continued to increase until near seven in the evening, at which time these symptoms subsided, but were soon succeeded by general excitement or great heat over the whole system, much pain in, and determination of blood to the head, diarrhoea and severe vomiting. I was sent for about nine. But instead of ordering, agreeably to the usual manner, saline draughts to be administered with a view to check the irritability of the stomach, or chalk mixture to restrain the diarrhoea, I made use of the lancet, and allowed the blood to flow, not according to measure, or any fixed quantity, but until the head was relieved. The vomiting moderated, and in about two hours afterwards ceased. I then immediately prescribed small doses of calomel and jalap to be given every four hours, to promote, rather than diminish the purging. On the third day my patient was able to walk out. I certainly have seen furious delirium as early as on the third day of fever, and have little doubt but that the case now stated, from the very sudden and great severity of the attack, would have proved so, if immediate relief had not been given.

When urgent symptoms are not present to require an earlier resort to the lancet, the most proper time for drawing blood is in the evening, during the febrile exacerbation, which generally commences about six, the

patients at that period bear it better, and the relief particularly next day, is always more effectual and permanent. Relief is generally found to be most decisive when the blood is sizzly; and it is, moreover, a pretty sure indication that a second bleeding will be servicable, if the first should not prove quite successful. It is therefore of much importance to attend to the appearance of the blood when drawn, and in consideration of these and other circumstances, the most common understanding must be convinced, *that on the judicious employment of no remedy does the life of a patient more frequently depend than that of blood-letting*, yet I have not only met with opposition, but the most unqualified abuse for bleeding even my own patients, rather than trust them in the hands of others! Physicians, according to the present mode, must not, as I have observed before, bleed their patients. It is derogatory to their consequence. I hope, however, ere long to see this absurd practice totally abolished.

There are two different states of the pulse which embarrass many physicians, and deter them from bleeding. If depressed in the beginning of febrile disorders, this state almost uniformly denotes the necessity of evacuations: because, minute investigation, ever discovers, that either local congestion or local inflammation is connected with it. In the other case, the pulse feels weak or feeble, the vital functions being impeded by the oppression of internal inflammation, especially in phrenitis, enteritis, and peritonitis. Nothing, therefore, can be more fallacious than to imagine, in the commencement of such cases, that the seeming depression of strength and weakness of the pulse prohibit depletory means:—the truth is, they powerfully indicate their propriety, and the system will rise, as if relieved from a load under their operation.

A correct knowledge of the quantity of blood to be taken away, will be best acquired by noting and studying cases, as it is evident that nothing but general directions can

be given in this particular. The precise rule in fever, and indeed many other acute diseases, should always imply the emission of blood, till the morbid symptoms are removed or relieved, or at least till some indications of injury becomes manifest from the operation being longer continued. The usual symptom of the permanent sinking of the pulse is a pretty sure index that bleeding has been carried to a sufficient length; but as relief in fever does not always instantly take place, it should be ever kept in view, that by too rigid an adherence to this rule, more blood may sometimes be drawn off than the disease absolutely requires. Little harm, however, can be done, by an excess of this kind at the commencement of the stage of excitement, and as long as the pulse continues good. But it may, at any rate, be judicious to attend to the particular quantities that have most generally proved most effectual. I do not mean by this caution to deter my readers from decisive, yet moderate phlebotomy; as I consider it of infinitely more importance, and of much more real value than all the other remedies used in fever; nay I am positively assured, that the dubious or even bad success of bleeding in fever has been wholly owing to the too sparing quantities usually drawn at the proper time and stages in that disease. But as I have before remarked, such quantities may lessen some of the most urgent symptoms, yet they seldom occasion a lasting impression on the morbid association produced by the fever. I wish it to be perfectly understood that in inflammations of the viscera, as also in the second stage of typhus, all the blood taken from an adult below sixteen or twenty ounces as coming under the above statement, unless there should exist some very marked indication to the contrary; and it is not improbable, that the old stale measure of a pound of blood, has done more mischief, and occasioned more deaths in acute diseases than any other species of inert practice which has ever been introduced into physic. In small bleedings the

practitioner frequently thinks that he has made the last effort to save his patient, but as no permanent benefit is derived from the supposed panacea, he resorts to something else possessed of real or imaginary efficacy, although generally far less powerful. Dr. Rush observes, that there are no half-truths in medicine. "This half-way practice," says he, "of moderate bleeding has kept up the mortality of pestilential fevers in all ages and in all countries. I have combated this practice elsewhere, and have asserted upon the authority of Dr. Sydenham, that it is much better not to bleed at all than to draw blood disproportionate in quantity to the violence of the fever. If the state of the pulse be our guide, the continuance of its inflammatory action, after the loss of even 100 ounces of blood, indicates the necessity of more bleeding as much as it did the first moment a vein was opened. In the use of this remedy it may truly be said, as in many of the enterprises of life, that nothing is done when any thing remains to be done. Bleeding should be repeated while the symptoms which first indicated it continue, should it be until four-fifths of the blood contained in the body are drawn away. In this manner we act in the use of other remedies. Whoever leaves off giving purges in a colic attended with costiveness before the bowels are opened? or who lays aside mercury as a useless medicine, because a few doses of it do not cure the venereal disease?" Thus it is that the ardent mind of Dr. Rush, in his *Medical Inquiries*, 1805, illustrates the futility and insignificance of scanty bleedings; and to every part of his doctrine I most sincerely subscribe. Indeed, in my own practice I have even gone further than the Doctor in respect of these; for he again says, (page 336) "in cases where the pulse acts with force and freedom, from ten to twenty ounces may be taken at once; but in cases where the pulse is much depressed, it will be better to take away but a few ounces at a time, and to repeat

“it three or four times a day.” Hence, from this it appears that the Doctor’s usual bleedings were on an average, about fifteen ounces, which quantity, at a medium, I have already mentioned as trifling ; and as to the mode of bleeding three or four times a day in small quantities, I consider it, in a general way, insignificant in the extreme. The principle, however, on which he practised this method certainly was ingenious, and worthy of consideration, as it may be suitable to some cases, particularly where the excitement is partial and the disease considerably advanced.

It will be hereafter shewn, that the different effects of the loss of blood may be generally traced to the habits of the patients, and particularly to the condition of the brain and nervous system. When the brain and nervous system have not been impaired, but retain their natural energy, the patient will bear a repetition of copious bleedings, without experiencing any debilitating effects ; in lax irritable constitutions, however, especially in feeble hysterical females, and in habits broken down by the long use of ardent spirits, the case is very different. In such constitutions typhus fever is, sometimes, attended with fits of a wild and almost maniacal delirium. But there are, nearly from the beginning of such cases, transient flushes of the face, succeeded by paleness ; the pulse weak and variable ; the hands slightly tremble, as in habitual drunkenness ; universal softness, and dewy moisture of the skin, which the gentlest exertions augment. Moreover, the heat is scarcely increased ; the look is eager and suspicious ; the manner of speaking particularly hurried and unconnected ; together with much apparent earnestness in the pursuit of a variety of imagined objects ;—the greater part of which symptoms mark a state of the brain and nervous system, under which, a patient would be apt to sink rapidly after a copious abstraction of blood, and therefore if other symptoms should appear to indicate venesection, it certainly ought to be employed on the

cautious plan of Dr. Rush. Respecting the pulse being much depressed, I have before explained, and in such case bleeding probably proves beneficial, by rousing the process of sanguification and other powers of the system.

But however much I may advocate the benefit of bleeding, it seems to me a very great error entirely to trust to phlebotomy, in fevers united with very high excitement. Because, to give effect to such a mode of practice, it becomes necessary to repeat the depletion of the vital fluid over and over again, and after all they very frequently fail to check the progress of the local affections; and where they do seemingly check those affections, they often induce an irritation and exhaustion, under which patients may quickly sink, or from which they recover very slowly, and afterwards require much time to regain the usual strength. This is another, among many, of the blunders which bring blood-letting into disrepute, and many practitioners not being aware of the real cause of their failure, exclaim against it in the language of Dr. Scudamore, who declares that “a degeneracy into chronic symptoms, is in no way so powerfully promoted, as by an intemperate employment of the lancet.” I am fully persuaded, that in all ages practitioners have, and still continue to be, too much in the habit of adhering to a favourite, unaided remedy; and this, more especially in the case of venesection, on which so many eminent practitioners have exclusively placed their expectations of success in inflammatory disorders. Had bleeding and purging always been united in the mode of treating highly acute complaints, much more favourable consequences would have ensued, than where either of the plans had been proceeded on separately. It is in the early, decisive, yet moderate use of the lancet, followed speedily by cathartics and alteratives, that rashness and timidity can alike be avoided; and by the efforts of these three agents judiciously combined a method may be formed, infinitely superior to any other

founded on one particular remedy. The cold affusion, though promptly applied, frequently will not make the slightest impression on fever until after bleeding, and the operation of cathartics alone would be far too slow to arrest its rapid advancement. Hence after early and moderate blood-letting, we must not pause an instant, as before hinted, but immediately prescribe brisk and alterative purgatives with a boldness commensurate to the danger; because upon their efficacy the favourable issue of the case will ultimately depend, notwithstanding whatever immediate benefit may have been derived from the bleeding.

I shall immediately return to the *second* stage of typhus, (page 106) after noticing the opinion of Dr. George Fordyce, who, in his celebrated Lectures, supports an idea, that fever is not arrested in its course by bleeding, and “as a fever once produced will go on, although its cause “be entirely removed, and as the continued or fresh application of a cause of fever neither will increase that “which is already produced, nor occasion a new one, “there can be no certainty as to the duration of a fever; “and it is only by attending to certain appearances or “changes, which usually take place on the approach of a “crisis, that we can form an opinion or decision on this “head” This may in some degree be correct, for blood-letting *alone*, as already shewn, will not always cure fevers; but when properly assisted and followed up by other remedies, which Dr. Fordyce and other practitioners in his time did not much employ, I am certain that fevers in general may either be cut short in their duration, so as to put on a healthy appearance in a week or nine days, if not sooner, or made to run their course in a mild form, ending favourably in about fourteen days, instead of having at the end of three weeks or a month to witness the unfavourable and horrid occurrence of starting of the tendons, picking of the bed-clothes, low mutterings or ra-

vings, involuntary discharges of urine and stool, coldness of the extremities, hiccups, and death.

Do not then on any account oppose the medical attendant, by a vague and erroneous notion of the patient's weakness ; the practical influence of which has murdered thousands. It is a notion replete with the worst of consequences, as, on a superficial view of the patient's condition, it appears to carry with it the sanction of truth. Every movement exhibits tokens of apparent debility ; all the feelings carry with them the oppression under which the patient labours. Misled by these feelings and appearances, it is the vociferation of old nurses, and physicians who flourish under the murderous system of bark and wine, that often paralyses the hand about to be exercised for the safety of the patient. By no means prevent the taking away of blood at the before mentioned period. Blood being accumulated in the head and extending along the continuation of that portion of the brain which is lodged in the channel of the spine, the sources of the vital power are oppressed : the involuntary muscles, however, are not so powerfully acted on by nervous influence as the voluntary muscles are ; but this occurs rather from their power being indirectly annihilated, by the ceasing for a time of the full powers of the sensorium and nerves, than from their own energies being interfered with ; for although the muscular energy may continue, the ability to will and to execute is entirely dependent on the sensorial and nervous powers, and is, therefore, lost because the functions of the latter are deranged ; and the feebleness of the patient is somewhat similar to a drunken man who can neither think nor walk. Nature does not allow the excitability and circulation to remain long in this state ; re-action soon commences and is shortly established, and all the more evident symptoms of fever detected. The mischief, however, will now begin agreeably to the quantity of blood circulating in the vessels, and the obstruc-

tion it may meet with in any of the organs important to life. I again repeat, that the fever cannot be subdued merely by repeated abstraction of large quantities of blood, and whoever thinks it may will find himself fatally mistaken, by the death of his patient in the third stage of the disease. A sufficient quantity should be abstracted at the onset of the stage of excitement, as before stated, and no more, in order to give fair chance to the constitution ; and if congestion or inflammation of any particular organ should take place in the progress of the fever, it ought to be removed by the application of leeches, by uninterrupted purging, and by calomel. But after all that has been written on the subject of administering calomel so as to saturate the constitution in cases of fevers and inflammations, the very contradictory accounts given by medical men, some contending for, others against it, while a third party seem to be of no opinion, and quietly submit to be guided by the dicta of either of the other two, shew that the indications for its exhibition have by no means been satisfactorily pointed out. In my own practice I can generally fix the time to a certainty, and shall endeavour to make it clear and comprehensive to others.

DRINK.—COLD & WARM AFFUSIONS.

During the first stage of fever when the heat is not yet evolved, the patient's drink should be a little warm, but at the arrival of the second stage, in which there is uncommon heat of the skin, with determined head-ach and thirst, the drink ought then to be cold, and draughts of cold water may be given with the utmost freedom, for they greatly relieve the patient's sufferings, and have even been known, when properly administered, to procure a sudden solution of this disease. The surface of the body should frequently be sponged with cold or with tepid water. Cold is, however applied with the most powerful effects, through

the medium of the cold affusion. Dr. Wright of Edinburgh, an eminent practitioner, claims the merit of having revived this ancient and inestimable practice of the Greek physicians, in his remarks on the malignant fever of the West Indies, in the year 1786. Dr. Wright himself having been attacked with typhus, on his passage to England, had the first striking proof of the efficacy of cold affusion in curing this disease. He says he felt himself relieved even by the cool air when on deck, which encouraged him to proceed. "I laid aside my clothes," says he, "and had three buckets full of cold sea-water thrown upon me at once. The shock was great, but I felt immediate relief; and a fine glow and diaphoresis succeeded. Towards evening, the febrile symptoms threatened a return: the same means were repeated, with the same good effects; and for the first time I had a good night's rest. Next day, no fever, but slight pain in my thighs, remained. I used the bath twice, and on the third day every symptom vanished. Another passenger, *Mr. Kirk*, was infected, and very speedily cured in the same manner." It must be in the recollection of every one the confirmation of the efficacy of this practice, first afforded in this country by the talents and genius of the late Dr. Currie of Liverpool. But, like many other efficacious and important remedies, the application of the cold affusion is not exempt from abuse; and which, no doubt, has tended to bring it into some discredit. "The safest and most advantageous time," says Dr. Currie, "for using the cold water is, when the exacerbation is at its height, or immediately after the declination has begun; and this has led me almost always to direct it to be employed from six to nine in the evening; but it may be safely used at any time in the day, when there is no sense of chilliness present, when the heat of the surface is steadily above what is natural, and when there is no general or profuse perspiration. Under these restric-

“tions the cold affusion may be used at any period of
 “fever; but its effects are more salutary in proportion as
 “it is used early. When employed in the advanced stages
 “of fever, where the heat is reduced and the debility
 “great, some cordial should be given immediately after,
 “and the best is warm wine.” From the urgency, how-
 ever, of the exhausted state of the patient, or from the
 prejudices of his friends, in some periods of fever, the
 application of cold water in the way of ablution may be
 regarded as too severe. In this case tepid ablution has
 been made to supply its place, and frequently with pro-
 priety and success. But, in order to ensure this success,
 it should not be committed to the unauthorised precipi-
 tantness of popular quackery. The term tepid is applied
 to water, from 87 degrees to 97 degrees of Fahrenheit;
 from 87 to 75 degrees the water is denominated cold.
 The use of the cold affusion then, must be used with be-
 coming caution, and invariably guided by the direction of
 the medical attendant, and by the existing temperature
 of the body of the sick, as pointed out by the thermome-
 ter, not only as to its extent, but the period of the di-
 sorder.

It is mere folly to attempt to excite perspiration in the
 hot stage of the disorder, as it cannot be accomplished,
 either by antimonials, warm diluents, or in any other way
 consistent with the safety of the patient. The means
 most likely are cooling drinks; and cooling ablutions, for
 it is certain that too much heat on the skin as well as the
 chilling absence of it, is alike unfriendly to perspiration.
 The operation of the *seemingly* different measures of *te-
 pid* and *cold* affusion, in alleviating or even checking fe-
 ver, is in perfect consonance with the principle laid down.
 It is evident that the violence of re-action, besides the ef-
 fect of *sensation* on the nervous system, during the affu-
 sion of cold water on the febrile surface of a patient, is
 alleviated by the abstraction of heat, while the febrile

irritation of strictured surface will be done away. It need not be urged, that these objects tend to a restoration of balance in the circulation and excitability; the other effect of cold affusion, such as a subsequent perspiration, will likewise have an analogous tendency. The effect of *tepid* affusion during the continuance of re-action, or the hot stage of fever, is exactly similar to that of the cold, only in degree less forcible; because we must recollect that the tepid bath should always be of a much *lower* temperature than the surface of the body, when applied in the *hot* stages of fever, and of course acts in reality as a cold bath, only in a way much more gentle. In applying it at about its highest range in the cold stage of fever, its effect in drawing nervous fluid and the blood to the periphery, and thus restoring the balance of the *circulation*, is direct and evident; while in restoring sensibility to the torpid skin, the balance of excitability must be equipoised. In a medical point of view, the tepid bath obtains the greatest effect in ardent fever, when the temperature of the body is little above that of health, or from 97 to 100 degrees of Fahrenheit, but the powers of the body weak, and not able to bear the vigorous application of cold immersion. When the heat of the body in fevers, as indicated by the thermometer, is about 100, and where the powers of the body in the early stage of the disease, is strong, the cold affusion is preferable to the tepid bath.

DIAPHORETICS.

Sweat is distinct to perspiration, easily obtained, but ever accompanied by bad tendencies. In all intermittent fevers, or those of a marked periodical type, there is such an obvious remission, or solution of the paroxysm in the sweating stage, that medical men must very early have endeavoured to imitate this wholesome process of nature by artificial means. This must, however, have often

led to calamitous consequences ; because remarking that heated rooms, multiplicity of clothing, warm liquors, &c., elicited perspiration in health, the same modes were resorted to in disease, and too frequently with the most direful results. It is but lately understood that the stricured surface of a febrile patient will rarely relax into a perspirable condition, till its temperature be diminished under the fever heat, and therefore in failing in their object, great injury was done, and when they were successful in *compelling* out a perspiration, the transient relief attained, by no means counterbalanced the previous augmentation of febrile excitement. The principles which govern the perspiratory process being now better understood, the long and endless medley of sudorific medicines is reduced to a few saline or neutral salts, such as the citrate of potash, or acetate of ammonia, together with, now and then, small doses of antimony. These, with *cool* diluent drinks, are the only safe and suitable diaphoretics in the febrile state ; and very likely act on the cutaneous vessels, producing a relaxation and moisture there, from their sympathy with the stomach. The carbonic acid gas, or saline mixture administered in a state of effervescence, affords more relief than any other medicine of this class ; and, in some cases, has alone proved an effectual remedy in fever—not by counteracting putrescency, as has been imagined, but by refrigerating the body, abating thirst, and lessening the morbid irritability of the stomach and general system, thereby acting in perfect concord with the principles I have attempted to support respecting the restoration of balance of the circulation.

PURE AIR.

The chief object to keep in view during the stage of excitement, being to subdue nervous excitability and thereby the morbid action of the heart and arteries ; this

is best completed by cool air, and the other means already mentioned. The sedative operation of cool air in all febrile complaints is readily explicable on the foregoing principles, and without which every other remedy is comparatively useless. Pure air admitted freely into the apartments of the diseased, together with personal and other cleanliness, is indeed alike requisite to the safety both of the physician and attendant, and is of far more value than all the *juggling* processes of fumigation, whether they consist of sulphuric acid poured upon the muriate of soda, or of Mr. Sutcliffe's "preventive *quota*, the *gaseous* forms of the acetic acid," which wonderful discovery he, in the Medical Repository, calls God to witness, has been too long withheld from the profession ! The proper admission of pure air into the chambers of the sick cannot be too much inculcated. It carries off the continually accumulating effluvia emitted from the body of the patient, diluting, weakening, and dispersing it, along with the numerous noxious animal exhalations ; and thus, by cherishing and contributing to renovate the healthy action of the system, the morbid heat of the sick body is not merely dissipated, but prevented from being again produced ; the aridity of the cutaneous system, the parched tongue and concomitant thirst, are all ameliorated. The admission of it, however, should be most free during the hot stage, and at all times to be limited by the patient's feelings. In calm warm weather, the air is very easily renewed by the use of a large fan, or what answers the same purpose, is a piece of thin canvas, stretched in a light frame of wood. But as water is a much better conductor of caloric or heat than air, and particularly of confined air, caloric is as much abstracted from the body by water, which is merely a few degrees lower than the internal temperature of the body, as by air of a much lower temperature.

DIET AND REGIMEN.

In the management of fevers one of the greatest errors is to administer wine and nourishing diet during its first period, with a view of counteracting the imagined debility, at a time when the whole system, oppressed by the action of the causation of the disease, must be overwhelmed by additional excitements, and too nourishing diet, which greatly increase all the attending symptoms; particularly heat and dryness of the skin, thirst, head-ach, delirium;—hurrying the milder, into the most dangerous petechial form of the disease. Want of appetite is one of the symptoms prominently complained of by the friends of the sick at every visit made by the medical attendant. It is a popular notion, that if the patient would but eat, his recovery would be speedy; and no sooner does the appetite fail, than the cook, the confectioner, and chemist, are called into action to redress this *atrocious calamity*, and caudles, condiments, and tonics, pave the way for bleeding, purging, and water-gruel! The idea, however, of strengthening the patient at this time by giving him nourishment is rendered in a great degree impracticable by nature having wisely deprived him of appetite for food, which salutary monition should be observed;—the only nourishment at this time nature requires, is water, toast-water, thin gruel, rennet-whey, ripe fruit, and pure air. The way for friends to serve the patient infinitely most at this time, is strict attention to his personal comforts, such as frequent changes of clean linen, bed-clothes, &c., and a kind supply of these where necessary; and while we endeavour to avoid absurd and exploded doctrines of former ages, we should as much as possible combine ancient experience with modern improvements.

Sydenham, complimented by the title of the *English Hippocrates*, has given so exact a description of this

simple mode of cure, that it would have been fortunate for the human race had all succeeding authors only copied him, or otherwise merely improved upon his practice. "Frequently," says he, "when called to persons "of low circumstances, I order them to do nothing "else, after bleeding and vomiting, when necessary, but "to keep their bed, during the whole course of the dis- "temper, and to sip only barley-water, gruel, and the "like ; to drink moderately of small beer, to quench their "thirst, and to exhibit a clyster of milk and sugar every "day. Towards the end of the fever, I allowed them "now and then a little stronger malt-liquor," in place of "cordials ;" such as the monstrous alexipharmics, the *Venice Treacle*, *Cordial Water of Saxony*, &c., the supposed preservatives from contagion, or to correct or expel it from the body, with which substances all-powerful fashion then rendered it requisite to drench such as could afford to be poisoned. Whereas in our days the tonic, or what is commonly called the *routine* practice, viz., indiscriminate, or premature and destructive libations of wine, every four hours a bark draught, particular doses of camphor julep and opium, succeeded the alexiterical stimulants of former ages, to which erroneous notions, professional as well as popular, the lives of millions of human beings must since Sydenham's time, 1689, have fallen a sacrifice ; which awful fact might be readily proved from induction and mathematical calculation.

CRISIS AND CONVALESCENCE.

With respect to the time when the disease may be said to commence, I would date this from the period that the patient was attacked with the first *distinct* rigour. This is in almost every case the first symptom with which the patients are affected, and therefore may be considered the surest criterion we can judge by. The stage of ex-

citement, having taken away blood sufficient, and well purged the bowels at the onset, will in all probability subside in about a week or nine days from its commencement, and a state of convalescence will follow ; but to this period the alteration is often gradual, and the crisis unaccompanied with any very marked symptoms. Were we to judge of this from the patient's own account of his amendment, we should frequently be greatly misled. The best criteria to judge by are the pulse, tongue, skin, and, above all, the expression of the countenance. The pulse becomes almost imperceptibly softer. The caloric or heat of the surface, unless by the immediate agency of cold, diminishes gradually ; and acquires that healthy feeling which the experienced chiro-physician very soon perceives. But even now, although the patient may be free from every symptom proper to fever ; and when the secretions, excretions and other natural functions, are comparatively healthy ; and thus the convalescence properly marked, we should proceed with caution respecting diet,—as too much nourishment, has occasioned more relapses after the close of the fever than any other cause whatever. The appetite generally becomes too good, frequently voracious ; it must not, however, be then indulged, as the digestion might not keep pace with it, and the disorder, and relapse ensue. But it is here to be particularly remarked, that as the fever sometimes prevails, a languid *insidious* kind of course occurs ; the head is generally bewildered or moidered, to use the common expression ; but it does not ache ; loss of appetite ; and wandering pains are every where felt, but more especially in the back of the neck, which becomes stiff and painful ; the tongue is white, and the pulse small, frequent, and generally oppressed ; the patient often sighs, and has no desire to move. In this way the disorder goes on for perhaps fourteen days with trifling variation, and then gradually passes into convalescence, leaving the patient weak and

much emaciated. The form of this disease is frequently met with in boarding-schools, and sometimes among female servants and paupers. We are now to recollect, that in consequence of the symptoms being of a treacherous nature, and assuming to superficial judges a simple appearance, the disease may have been of considerable standing before we were called in, and the nervous and muscular strength of the patient considerably exhausted, yet in this case, after a brisk purge and the use of the tepid bath, a few ounces of blood may be taken away with safety and efficacy. Although the practice of blistering, at the neglect of bleeding and purging, was formerly carried to a most unreasonable extent, and not unfrequently the poor patient has been tortured with half a dozen of blisters at a time in the advanced stage of this species of the disorder, it is assuredly of the greatest use when the urgency of the particular symptoms point it out. After the bleeding and purging, a blister on the nape of the neck will remove the confused condition of the brain; and generally nothing more need be done during the course of the fever, but the taking every day a dose of cathartic medicine until convalescence becomes evident by a returning wish for food. In this case the time is again arrived when a state of comparative abstinence must be departed from gradually. It occasionally happens at this period, the excited disturbance of the brain having subsided, that the exhibition of some gentle stimulus, such as small doses of the subcarbonate of ammonia dissolved in any aqueous vehicle, or a few drops of sulphuric ether dropped on a piece of sugar, is useful in rousing the torpid senses into action, and the patient will appear considerably refreshed at every dose of the medicine. Tepid currant-wine whey is an useful drink, and the quantity of wine allowed should be increased, and occasionally repeated, in proportion to circumstances. Where nervous irritation only prevails, small doses of opium repeated at

proper intervals, allays this, and tends powerfully to restore the exhausted strength of the patient. The hop, however, has been by some thought more beneficial in allaying the nervous restlessness attendant on this stage of the fever than any other anodyne, whilst others prefer the henbane.

But by neglect, typhus fever, at first generally so mild in its tendency, may, in many individuals, become a formidable and even fatal disease. We are too liable to despise every precautionary means of safety, and young people, who have never been ill are apt to think their health can never suffer from any imprudence whatever. The same feelings which expose such persons more than others to the occasional cause of fever, frequently prompt them to resist the proper means of cure in the early stage of the disorder. Should the excitement, which is that stage of fever that exhibits the disorder in its maturity, be suffered to form fully without previous evacuations, it may be difficult to foretel the actual result; as the brain, the lungs, the liver, or indeed any other important organ in spite of the most active and most judicious measures, may take on an inflammatory action, and terminate fatally. This observation should exert people to the careful observation of precautions contained in this Essay; and should individuals indicate the least symptoms which have been set down as forming the first stage of the fever, no time ought to be lost in sending for the medical attendant, whose prompt and prudent measures may disarm the disorder of its fatal power. By no means let the opportunity be lost of getting medical advice before the disorder has taken possession of the strong holds of the constitution, from which, perhaps, all the ingenuity of management, and all the energy of the most able and experienced practitioner, shall not have the power to dislodge it.

It is finally to be observed respecting the very various

modes in which this fever makes its attack, that frequently it comes on so gradually the persons affected continue at their usual employment for some days, nay it is not uncommon for patients to state that they had felt themselves "faltering" for several weeks before all the symptoms of fever were manifest. Most commonly, however, the attack is sudden, the patient previously feeling no unusual sensation: frequently when at work; getting out of bed, though they had gone to it in complete health the preceding evening; or, indeed, subsequent to any unusual operation or exertion, they are attacked with severe head-ach, pain of back, nausea, and frequently vomiting or diarrhœa. When the brain is early and actively inflamed, typhus often goes on rapidly to a mortal issue, the stage of excitement not employing more than forty-eight hours, and the following one of collapse a still shorter time. The practitioner, however, is highly blameable should he neglect to avail himself of every favourable opportunity which may offer in the first and second stages, as much may then be attempted with safety. We should, indeed, in some instances, imitate the practice of Asclepiades, who, as Celsus acquaints us, allowed his patients very little respite in the beginning of fever. But in the last stage, especially of severe cases, it would be wrong nay dangerous to attempt a great deal. How important then must it be that the best time of laying the foundation for the cure of diseases, and when the efficacy of medicine can be decidedly demonstrated, should not be lost by the too frequent practice of erroneously relying on the consequences of a consultation?

The chief object in exhibiting the foregoing pictures of fever is not only with a view of holding out plans of treatment to be pursued under the many shades which it presents, but also to do away existing prejudices that offer so many obstacles and stumbling blocks to the progress of recovery. And I sincerely hope what I have said will not

be misapplied, but that it may be of general good to mankind; and more especially not to encourage any unprofessional person to undertake the treatment of the disease, but to explain the necessity of instantly having the proper advice of medical men whose capabilities and experience enables them at once to lay the ground plan of treatment, and thus convey the patient safely through every stage of the disease. We have occasion every day to regret the loss of the opportunity of strangling the disorder on its first appearance. If these admonitions, however, should make a proper impression on the public mind, favourable to the timely employment of efficient remedies by professional men, there will be great cause on all sides to rejoice.

In this outline of the essence of fever and its treatment, sketched from nature at the bed-side of sickness, I have not described the effects of MERCURIALIZING the constitution, as some notice will be taken of it in another place, and requires particular management.

EMETICS

Have in determining to the surface a close affinity to the diaphoretic remedies, but are more violent in their action. The gastric irritability which usually accompanies fevers in general, (the cause of which I have explained nearly at the commencement of these pages,) might have led to suppose that nature aimed at relief by unloading the stomach, and hence the early use of emetics. They certainly are not now so often employed; but it is equally certain that they produce other salutary effects beyond the mere evacuation of the stomach. They determine to the surface, in common with diaphoretics, and induce a relaxation there, which commonly ends in perspiration. Hence their utility, in particular cases and kinds of fever, is unquestionable, and truly consonant with the principles I have endeavoured to establish, that of equalising the

circulation ; but their violence, in certain fevers and climates where unusual irritability of the stomach too frequently prevails, has occasioned them to be greatly disused, even in opposite circumstances, and when the general system requires to be roused, as sometimes in the cold or collapsed state at the commencement of fever.

INFLAMMATION OF THE STOMACH AND BOWELS.

As inflammation of the stomach (gastritis) and inflammation of the intestines (enteritis) are of very frequent occurrence, and from mal-treatment often destroy the patient, I shall briefly notice them in this place. The former is more rare than the latter, and may be easily distinguished from any other disease, by the burning pain ; heat and tension in the region of the stomach ; by that pain being aggravated when any thing is swallowed, with the instant rejection of it ; and by the sudden and greater depression of strength in this inflammation than in any other. Enteritis indeed is the only disease it can be confounded with, which is very discernible by the pressure of the hand over the seat of pain. The general symptoms are, a severe burning pain in the region of the stomach, with much soreness, distension, and flatulency ; violent and painful vomiting, more especially by the taking in of food, whether liquid or solid ; most harassing thirst, restlessness, anxiety, and a continual agitation of the body, constant watching, delirium, and a rapid, hard, and contracted pulse. Some cases are attended with severe purging. If the disorder increases in violence, symptoms of irritation then ensue : great loss of strength, with faintings, a short and interrupted respiration, cold clammy sweats, hiccups, coldness of the extremities, the pulse intermitting, and the patient will be soon cut off.

In the treatment of inflammation of the stomach, large

and frequent bleedings must be early resorted to, not in the least regarding, or being intimidated by the minuteness of the pulse, as it generally becomes softer and fuller after the operation ; or by the appearance of extreme debility, syncope, or convulsions, all these are the usual effects of the disease. After copious venesection, topical bleeding by leeches over the stomach, or cupping may also be immediately employed.

Inflammation of the intestines can only be confounded with colic ; but from this it may readily be distinguished, as the former is attended with fever, and a hard, small, and contracted pulse, which is often accelerated, although sometimes peculiarly slow ; and the pain being increased by pressure, whereas in colic it is alleviated. Enteritis comes on with an acute pain, generally extending over the whole of the abdomen, but more particularly severe and twisting round the umbilicus, which is more or less aggravated on pressure ; likewise tension of the abdomen ; obstinate costiveness ; eructations, sickness at the stomach, tenesmus, or vomiting, as the inflammation happens to be in the superior, or inferior portion of the intestines ; the matter vomited is generally bilious, thirst, heat, great anxiety, and a hard small pulse. After a little time the pain becomes more severe, the bowels are affected with spasms, the whole region of the abdomen is highly painful to the touch, and seems drawn together in lumpy contractions ; invincible costiveness prevails, and with much difficulty and pain the urine is voided. If the inflammation continues to proceed with violence, it terminates at last in ulceration, schirrus, or gangrene ; or will go off by resolution. Enteritis is ever accompanied with great danger, as it frequently terminates in gangrene in the space of a few hours after it commences : which circumstance is noted by a sudden abatement of pain, sinking and irregularity of the pulse, contraction of the features, syncope, urine suppressed, hiccup, and disten-

sion of the belly, which sounds, on being struck with the the finger; but the disease more frequently proves fatal during the inflammatory stage. If the pain and other symptoms gradually diminish;—the abdomen becoming less tender to the touch;—the pain changing its seat, and not confined to a particular part;—if a free and natural evacuation of stools takes place, if an universal diaphoresis, accompanied with a firm equal pulse, comes on, or if a copious discharge of loaded urine, with the same pulse, occurs, a resolution and favourable termination may be anticipated.

In the cure of enteritis, it will always be prudent on its first appearance to lessen the general impetus of the blood, and allay inflammatory action in the bowels, by having recourse to copious bleeding, which should be repeated according to the violence of the symptoms, and the age and strength of the patient. It may be found necessary to repeat the bleeding three or four times within a short period, for although the pulse may seemingly be weak at first, it will again rise. After plentiful venesection, topical bleeding by leeches applied to the abdomen, will be necessary, particularly in those cases, where we are fearful of venturing on so much general blood-letting, as seemingly may be required. Bleeding, although of the greatest importance in enteritis, is not always adopted to produce a powerful impression upon the system at large. But although in this, as in other phlegmasiæ, the quantity of blood taken away is to be regulated according to the age, strength, extent, and period of the disease, yet it will be recollected that in this complaint the pulse is generally peculiarly more low and contracted than in other cases, and from the severity of the pain and other causes great lowness of spirits and prostration of strength soon ensues: let it, however, also be remembered, that even under these unpromising appearances of weakness, blood-letting must be resorted to in order to check the

inflammation, for if this be allowed to go on merely because the patient appears to be weak, an objection very commonly made, the disease will certainly quickly destroy him. Our attention, therefore, particularly at first, should be directed to the subduing the inflammation of the bowels by large and repeated venesections; by local bleedings; by warm fomentations to the lower extremities; by linen clothes wet with cold water and applied over the region of the belly; and by applying a blister to the abdomen: when this is done, and the morbid irritability of the stomach subdued, cathartics of the mildest nature may then, and not before, be resorted to, in order to remove constipation; but in this case, constipation is not the cause of the disease; it arises in consequence of the inflammation; it therefore should not be the symptom first attended to. It is, indeed, a custom much too prevalent to have recourse to active purgatives at the very beginning of enteritis, and this too in powerful doses, which in my opinion, must ever prove very injurious. This would be readily avoided by carefully distinguishing this disease from colic and from simple constipation. The intention no doubt is to evacuate the bowels, let it however be considered in what way this is done in the healthy state; purgatives empty the intestinal tube, *increase the secretions*, and accelerate its peristaltic motion by means of their specific stimuli:—now, I wish particularly to express, that in enteritis the bowels are already excited to the utmost; that they are in, or at least tending to, a state of high inflammation, and that no part of the whole pathological system is more fully ascertained than that excessive excitement *lessens secretions*; that by applying stimulants to an inflamed membrane, every secretion which it was accustomed to pour out, is locked up. Hence in this case purgatives are very improper, and if given will not operate as a purge; at least it will be partial and without affording relief, we must therefore not

be deluded into a security from this seeming success. Having then localized the disease by promptly and judiciously adopting the means before mentioned, and when the vomiting and nausea are abated, a full opiate, united with a liberal dose of calomel, will afford great relief, and after which we may venture to give some mild cathartic medicine by the mouth, such as a very weak solution of the sulphates of magnesia or soda, castor oil, manna, or the tartrate of potash in an infusion of senna ; but of these the first may be the most preferable. A tea-spoonful may be dissolved in a cupful of water, and repeated occasionally, or between every four and six hours ; and in the interval smaller doses of opium and calomel may be administered. Cold water should be taken for drink, and its use, externally and internally, in addition to the calomel and other remedies, may be employed with the greatest freedom and safety. For the last seven or eight years, instead of the warm fomentations usually employed, I have almost invariably ordered the coldest water, or that mixed with vinegar, to be repeatedly applied to the abdomen. If more active purgatives are afterwards necessary, from the intestines remaining in a torpid state, the submuriate of mercury, with the extract of colocynth made into small pills, may perhaps be as good a purgative as we can employ. To assist in relieving tormina emollient enemas blended with mild aperients, as castor oil in thin gruel, or an infusion of senna, may be injected. To relax the spasms, in very obstinate cases, and thereby remove one of the principal impediments to the cure, tobacco enemas are sometimes employed, but they are very liable to cause nausea and vomiting, and if not used carefully, may totally extinguish life. In fact, I have little faith in their utility, and rather than irritate the already tender parts by such means, would strongly recommend cold affusion of water to the abdomen, which will more readily and with greater safety, not only remove the

spasms, but promote secretion, and excite the due peristaltic motion in the intestines. I speak from experience, having in many severe instances employed the cold affusion with the desired success, and in several of the worst cases after the foregoing means had failed.

As inflammation of the peritonæum (peritonitis) requires a treatment very similar to enteritis, the following contrasted cases, taken from the Compendium of Medical Practice, will forcibly illustrate the advantages of active practice in the cure of these and other acute disorders; but in the first case the quantity of blood drawn off appears immense. It shews, however, that the system can, under acute inflammation, bear the loss of a much larger proportion of blood with impunity than it could under other circumstances. “A young woman, eighteen years of age, was suddenly attacked with the symptoms of acute peritonitis. She complained of extreme pain over the whole abdomen, which was greatly aggravated by pressure. Her pulse was hard, small, and frequent; her countenance anxious, her tongue white, her skin hot and dry. From thirty to forty ounces of blood were taken away for five days in succession, and afterwards a few ounces occasionally, when a febrile disposition was perceptible. The total quantity of blood abstracted was two hundred and forty ounces. She remained in a debilitated state for some weeks, and ultimately perfectly recovered. A boy, aged seventeen years, labouring under precisely similar symptoms, had fallen under my observations,” says the author of the Compendium, “a short time previously. I never saw two cases bear a more striking resemblance to each other. Sixteen ounces of blood were taken from his arm, some leeches applied to the abdomen, and half an ounce of the infusion of digitalis was directed every six hours. The boy died at the end of three days from his first seizure. The digitalis produced no effect either upon the pulse, head, or stomach.—

“The peritonæum and intestines exhibited traces of the
 “most active inflammation. The intestines were glued
 “together; flakes of coagulable lymph were deposited
 “upon their surfaces; and nearly a gallon of serum had
 “been poured into the cavity of the abdomen, in which
 “globular transparent pieces of lymph were also floating.
 “*Remarks.* The violence of the pain, tenderness, &c.,
 “form the best criteria for estimating the danger of the
 “patient; and our practice must be regulated by their
 “intensity. If we pay any regard to the pulse, we shall
 “be more frequently deceived than assisted by it.”

It is absolutely necessary in all enquiries to have a clear and perfect conception of the object in view, and when the great importance of inflammation, in its various stages, in parts variously formed, is considered, both as constituting one of the most frequent, diversified, and mortal disorders, and being closely connected with nearly all the diseases to which the human frame is liable, (and as blood-letting is not only the primary but the paramount remedy,) I may be excused for devoting a large portion of this Dissertation to an enquiry respecting not only its nature, or, agreeable to medical language, its proximate cause, which has already been done, but also to its treatment by different practitioners. Some physicians pause about bleeding on the first attack of acute visceral inflammations, supposing, that such expedients as purging and blistering will eventually succeed and answer all the purposes. And when an alarming increase of symptoms appear and they see their error, they then begin to bleed over and over again, till at last exhausted nature sinks not less from an excess of evacuations than from the original complaint. Some months ago a very promising youth, fifteen years of age, the eldest son of a respectable family in this city, was attacked with inflammation of the intestines, and agreeably to custom the surgeon-apothecary was called in to treat the disease while it was *supposed* to be in its simple state,

and when the symptoms became dangerous he was then to have recourse to a consultation with a physician. The apothecary accordingly assailed the disease, but it was in a manner so inconsistent that death soon denoted its near approach; the physician, who was expected to act some great and mighty feat, was hastily sent for. The apothecary commenced *his* operations by copiously administering purgatives, which medicines it has already been shewn are improper at the onset and during the inflammatory condition of the bowels. He also employed feeble and inert bleedings, such as could make no curative impression on the disease. On the other hand, the learned Doctor began *his* attack by ordering large bleedings, at a time when even the attendants could see that the patient was moribund, and in a few hours he expired! Now, can it be said, even by those who favour and continue to countenance the old mode of practice, that this unfortunate youth had a fair chance of recovery? The surgeon-apothecary, who has been in full practice between thirty and forty years, should have known better than to rely on such treatment as he employed at the beginning of the disease; and the learned Doctor ought to have known that copious bleeding at the late stage of it was only calculated to hurry the patient to the grave. But this is what *they* call, and is understood to be, a *consultation*! and the generality of people, I am sorry to say, cannot see its evils, though of very frequent occurrence. (I could here wish to refer the reader to pages 15, 86-7, &c.) The loss of very many inestimable hours from such inexperience and thoughtless rashness, is not to be repaired. In the hands of a chiro-physician, who would have concentrated and so exerted his curative powers, as to occasion, with the least possible loss of time, a complete alteration of action in the circulation, the life of the patient would, at least, have had fair play. Experience convinces us more and more of the great superiority of

promptly applying decided measures at the commencement of acute diseases, instead of wasting valuable moments in feeble, secondary, and reiterated attempts, which almost always end in the discomfiture of the practitioner, and even the death of the patient.

In the treatment of acute diseases, it should ever be remembered, that on the first remedies and the early application of them, depends the future issue of the case. This leads me to observe, that an acute disease is accompanied with violent symptoms, terminates in a few days, and is attended with great danger. It is opposed to a chronic disease, which is slow in its progress, and not so generally dangerous. Of acute diseases, some are simple acute, others peracute, that is very acute; others again are perperacute, or exceeding acute. Those that are simple acute are completed in 8, 10, 11, 14, 20, or 21 days. Very acute diseases in 5, 6, 7, or 8 days; amongst which is pneumonia, or inflammation of the lungs. Exceedingly acute diseases are such as terminate in 3 or 4 days at farthest, as apoplexies, &c. Those acute diseases which suffer changes are very fickle; for sometimes they increase, and at other times they are remitted; and sometimes they change out of acute into chronic diseases; and thus a continued fever may change into a hectic fever, or an intermittent fever into a continued fever. If, then, the practitioner be unable to discriminate these varieties of diseases and their changes, great mischief must be the consequence; and those of a simple kind are sometimes the most difficult to treat, as, for instance, it is not possible perhaps to lay down an exact and general rule respecting the period that phlebotomy should be repeated in simple inflammation. In those of an acute nature, should the first bleeding not afford manifest relief, a second ought not to be long deferred. To remain half an hour, or even longer, with the patient after the operation, in order to see its full effect not upon the pulse only, but upon the

local affection and the general habit, is exceedingly proper, and it is performing an essential duty, highly becoming the experienced and humane chiro-physician. It would be well if the custom were universal. If in that short and important time a marked alteration for the better could not be perceived, I would recommend the arm to be re-bound and the blood again allowed to flow, until the pulse fluttered under the finger, from approaching syncope. Should the blood at this second bleeding not issue in a full stream from the orifice first made, I should instantly advise the opening of another vein, that it might be drawn off as speedily as possible, to bring on that temporary collapse of the system, so remarkably efficacious in all inflammatory disorders. By adopting this plan, bleeding, upon an average, will not be necessary more than twice in the most intense inflammations, nor, in all, will more than about forty ounces of blood be required to be abstracted, when the case has been properly managed in the first instance. In particular cases, however, the quantity may materially vary, in some much under, and in others much above this average. After this use, should faintness or syncope occur, moderate bleedings may be quite as serviceable as large ones succeeded by one or other of those effects. But when large bleedings have not been followed either by faintness or syncope, in such cases, it is clear, that they are not always so beneficial as moderate ones occasioning either of those states. This subject has been further illustrated at pages 116-7. The quantity of blood which may be taken away at one time in acute inflammations has greatly varied, even from eight to forty ounces. But generally perhaps not less than sixteen, and seldom more than thirty ounces at a time should be extracted. I have heard of some practitioners who have taken from fifty to sixty ounces of blood at one time. I have no doubt but this may be done sometimes in acute cases in this country and indeed

in some tropical climates it may frequently be accomplished, particularly where the *excitement* of febrile disorders is so violent in its attack, and rapid in its progress. I must say, however, that such extraordinary depletion at one time can only be justified in very rare and most extreme cases. On a few particular occasions forty ounces at once may be drawn and with much advantage to the patient; but certainly I would not recommend this as a general practice.

Inflammation of the peritonæum often occurs in women after delivery, and is occasioned by the same causes which occasions uterine inflammation. In January last another surgeon-apothecary of this city, who has been in practice more than thirty years, had two of his patients, in one week, die of diseases of the puerperal state. The one being a poor woman had no consultation. The other was rich and had a consultation. Now which of these two unfortunate females had the *best chance* of recovery? A superficial and unreflecting observer will immediately assert that it was the one who had the consultation. Let us then examine the merits of this, for it is of vital importance to the public that it should be explained. It appears this surgeon-apothecary and accoucheur, together with six or seven others of the same class, pronounced, in the Worcester Newspapers; in the year 1805, themselves incapable to conduct the treatment of diseases in their complex state, but that they were to have the management of them only in the first instance when they were supposed to be simple, and on their becoming dangerous, or were made so, a physician or a surgeon, as the case may be medical or surgical, was to be consulted, and that they were to decide when this was necessary, although from their own declaration they could not recognise the nature of the disease and its various stages. But in this case above alluded to, when surgical assistance and decisive measures were really necessary, this surgeon-

apothecary neglected to consult any one, and after delivery no consultation was held until a few hours before the patient expired. The physician, (who was the same learned Doctor as alluded to in the foregoing case of inflammation of the bowels,) declared that he was called in too late. Of what use then was this consultation? And supposing this physican had been called in sooner, what service could he have rendered when it is well known that he has no practical knowledge of diseases of the puerperal state, his information being merely theoretical? He may probably have read of them, and he may talk of them with much volubility,—for with copiousness of speech the learned Doctor is said to be at least profusely if not profoundly gifted,—but at the bed-side of the patient he could not, for want of practical knowledge, distinguish one disease from another, or trace their rise and progress, he therefore was a very unfit person to be consulted on such a serious occasion. Those physicians not practically informed on obstetric and all other diseases are a most serious injury to the public. Had a chiro-physician been consulted in this case, he would have advised and given assistance at the proper period, and after the accouchment he would have promptly and judiciously applied such remedies as would have subdued any disease on its first appearance. I know from extensive experience that in this way a great deal of good might be done for the public, and am confident that deaths from either child-bed fevers, inflammations, &c., would be extremely rare were they properly and ably treated. But it is truly unfortunate for the community at large, that popular opinion does not encourage medical men to make themselves sufficiently acquainted with the different branches of the medical art. The present system must be considered by every thinking person disgraceful, as it converts the profession into one of the most extraordinary of the inhuman traffics; and that this system should by many

be so strenuously supported is truly degrading to the boasted reasoning powers of mankind. I would therefore most earnestly recommend, particularly to those ladies and gentlemen who so laudably exert themselves on all humane occasions, to thoroughly investigate these most important matters, and not allow themselves any longer to be deceived.

At present typhus prevails pretty generally in this city and neighbourhood, and as I have frequently been solicited by some of the clergy and others, who have benevolently visited many of my patients, to state my opinion respecting its infectious or non-infectious nature, I beg to refer the reader to pages 51 and 59; and I shall endeavour, in some succeeding page, to draw a true and faithful picture of the situation and sufferings of the lower classes of our fellow-creatures in cases of febrile diseases.

BLOOD-LETTING.

IT will be seen from what I have already stated, that in all diseases we must regulate and adapt the strength of our remedies according to the mildness or severity of the symptoms, &c., and that remedy which in this Dissertation particularly elicits our attention in diseases of inflammatory excitement and those of congestion, is, of course, *blood-letting*,—under which term is comprehended every mode that may be employed for the salutary purpose of taking away blood in order to prevent or relieve diseases. *Blood-letting is either general or topical.* By *general bleeding* is meant, the lessening the whole mass of circulating blood: *topical*, means lessening the quantity of blood in a particular part, and is usually performed in the vicinity of the disease. *General blood-letting* is again divided into two kinds, viz. the opening a vein, called *phlebotomy*, or *venesection*, and by opening the temporal artery, or one of its branches, called *arteriotomy*. The operation in both is performed with a lancet. *Topical blood-letting* is performed by a scarificator and cupping-glass, by leeches, or by dividing with a lancet the visibly distended vessels.

Blood-letting is of very great antiquity, and much resorted to in the different parts of the world. It has been the custom in Asia, from the remotest ages, to bleed in the plague. Dr. Friend, in his *History of Physic*, fourth edition, page 16, informs us that Oribasius, who flourished in the time of Julian the Apostate, mentions particularly that, being himself attacked with the plague when it raged violently in Asia, he scarified his leg on the second day and abstracted two pounds of blood; and

adds that this method not only succeeded in himself, but also in many others. It has also been, from time immemorial, the custom with the American Indians. In Africa, when Mr. Park was at Bondon, the king of the country, received him sitting on a mat. "I had no sooner," says Mr. P., "entered the court appropriated to the ladies, "(ten or twelve in number,) than the whole seraglio surrounded me, some begging for physic, some for amber, "and all of them desirous of trying that great African "specific, *blood-letting*."

It is a powerful means of laying the *foundation in the cure of numerous diseases*; capable of much good or of much harm, according to the circumstances under which it is applied, and the manner in which it is managed. Of all the remedies used in fever and phlegmonous inflammation, it is the most powerful, and the most decisive; at the same time with regard to its employment, in the former especially, the most undecided with respect to medical opinion, of both ancients and moderns. If Hippocrates considerably neglected it, Aræteus, Celsus, and particularly Galen, made ample use of this herculean and important measure, as will hereafter be shewn.

The Medico-Academical Society of Paris, a few years since, proposed as its Prize Question, "What are the "symptoms which *indicate*, or *contra-indicate* Blood-letting in Fevers; whether intermittent or continued, designated under the denominations, Putrid or Adynamic. "Malignant or Ataxic?"

Where genuine phlegmasia, or a phlogistic diathesis, exists, bleeding, topical or general, is almost always more or less an indispensable remedy; but the existence of such condition is not in every instance readily ascertained. This state, however, *must* be discovered if possible, and in fevers and all acute diseases, the *judicious* practitioner will constantly keep in view the preservation of all the organs from the dangers immediate and remote of high

inflammation : blood-letting checks deranged movement, and sometimes lowers and sometimes raises sensibility to impression ; in consequence of which, other remedies may produce those motions, which are similar to, or which are the identical movements of health. In these respects it is useful in the *beginning* of the excitement of most fevers ; the beneficial and peculiar advantage of employing it in the primary stage of which, however, has hitherto been too little regarded by the faculty. If indeed the *circumstances* in which it is employed be the proper ones, and its management well conducted, it rarely fails of promoting a salutary effect ; but the most judicious manner of employing this potent remedy requires particular notice ; for on this, in a great degree, depends its success ; and to the contrary may be ascribed, I believe, not only its failure but its disgrace. We are, however, in perpetual hazard of doing too little or too much in the practice of physic : this is particularly the case with the adoption of blood-letting, because it is not at all periods an easy task to make our measures just suited for the removal of the urgent symptoms, without exhausting the resources of the system. *Blood, the vital fluid, is not to be drawn off by measure so much as by its effects.* To write down in a prescription the number of ounces to be taken away is absurd, as being attended with the most serious danger ; because half the quantity, when put to the test, may in some cases, agreeably to the nature of the disease and constitution of the patient, prove sufficient ; while, on the contrary, twice the quantity ordered might not be enough to subdue the morbid action ; and this may be readily evinced at the time, by examining and comparing physicians' prescriptions wherein it is so written. In a practical point of consideration no remedy is of more importance than blood-letting ; yet no remedy is more abused, none treated with greater apathy and indifference, as to its good or bad effects upon the consti-

tution; I would therefore earnestly entreat the public, as it regards its own welfare, to consider this subject in a more serious and lucid light than has hitherto been done; at the same time I would strongly recommend practitioners to accurately investigate its powers, on an enlarged and comprehensive view, as they value the vital interests of society, and the advancement of the medical art.

The Editors of the Gazette of Health, a most ingenuous and useful periodical medical and surgical work, in their number (54) for June last, make the following valuable pathological and practical remarks,—“The abstraction of blood is one of the most powerful means of reducing the violence of inflammatory affections, and checking the progress of those of inflammatory excitement. With the extent to which it may be safely carried in cases of inflammatory attacks of the brain, lungs, stomach, or bowels, and its effects in many diseases, apparently of debility, few practitioners are well acquainted. *On the judicious employment of no remedy does the life of a patient more frequently depend, than that of blood letting.* “In cases of inflammation of the lungs and brain, we often find a patient to sink rapidly after a copious abstraction of blood, while in another, apparently similarly affected, the inflammatory symptoms will considerably abate, and the muscular system acquire strength after a loss of blood, to the same extent. These different effects may be generally traced to the habits of the patients, and particularly to the condition of the brain and nervous system. When the brain and nervous system have not been impaired, but retain their natural energy, the patient will bear a repetition of copious bleeding, without experiencing any debilitating effects; and in such patients, even when affected with a disease of debility, a spontaneous hæmorrhage or artificial bleeding frequently proves beneficial, probably by rousing the process of

“sanguification and other powers of the system. By
 “bringing into action the absorbent system, many di-
 “seases may be cured by it, the leading symptoms of
 “which contraindicated the use of a remedy of a debili-
 “tating nature. When active inflammation, or an inflam-
 “matory state of the constitution, exists, bleeding, either
 “local or general, is more or less an indispensable reme-
 “dy. Inflammation depends more on increased excite-
 “ment of nerves than the state of the blood or blood-ves-
 “sels; that it commences in the nerves, and that the
 “distension of blood-vessels is the consequence of the
 “nervous excitement. As the distension of blood-vessels
 “greatly tends to keep up the morbid excitement of the
 “nervous system, it should be reduced either by local or
 “general bleeding, according to the state of the constitu-
 “tion; and when this is effected, the judicious practi-
 “tioner will attempt to quiet the nerves of the part, either
 “by local application, or by producing a determination
 “of nervous fluid to another part by stimulants, or the
 “employment of both.”

These observations, which eminently corroborate my
 own, emanated from the Editors in consequence of their
 reviewing what I had previously published. The subject,
 however, though it may appear trifling to some unreflect-
 ing persons, is, in its multifarious windings, as difficult as
 it is important; and a right understanding of its *modus*
operandi, founded on the principles and laws of the ani-
 mal œconomy, requires long and multiplied observation,
 and no ordinary degree of ardour and perseverance. It
 has for a series of years closely engaged my attention,
 and it has, in fact, long maintained an undulating reputa-
 tion among the first characters in the profession, some of
 whom have been induced to change even their own sen-
 timents of its utility. We may therefore certainly con-
 clude that it has been, under some circumstances, conspi-
 cuously useful; under others, conspicuously the reverse.

While this confession on the part of authors is honourable to the individuals, it is equally mortifying to the pride of reason and the dignity of medical science.

The proportionate quantity of blood to be taken away according to the different ages might at first view, particularly in common cases, appear to stand thus :

Years—35	} lb. or 16 ozs.	Years—80—13	ozs. $7\frac{1}{4}$
34		12	..... $6\frac{1}{2}$
33	} .. ozs. $15\frac{4}{5}$	90—11	..... 6
32		10	..... $5\frac{1}{2}$
31	} $15\frac{3}{4}$	100—9	..... 5
40—30		8	..... $4\frac{1}{2}$
29	..... $15\frac{1}{2}$	7	..... 4
28	..... $15\frac{1}{4}$	6	..... $3\frac{1}{2}$
27	..... 15	5	..... 3
26	..... $14\frac{1}{2}$	4	..... $2\frac{1}{2}$
50—25	..... 14	3	..... 2
24	..... $13\frac{1}{2}$	2	..... $1\frac{3}{4}$
23	..... 13	1	..... $1\frac{1}{3}$
22	..... $12\frac{2}{3}$	Months—9	..... 1
21	..... $12\frac{1}{3}$	6	drms. 6
60—20	..... $11\frac{3}{4}$	3	..... $4\frac{1}{2}$
19	..... 11	1	..... 4
18	..... 10	Weeks—3	..... 3
17	..... $9\frac{1}{2}$	2	..... 2
70—16	..... 9	1	..... $1\frac{2}{3}$
15	..... $8\frac{1}{2}$	Days—4	..... $1\frac{1}{3}$
14	..... 8	2	..... 1
		0	..... $\frac{2}{3}$

Remarks.—The lb. or 16 ounces, forming the column of quantity, implies the liquid pint in measure, and is applicable to the quantities of blood to be taken away. In this table the age of 35, not 21, is regarded and assumed as the acme or height of bodily strength or vigour, and requiring, *cæteris paribus*, to be drawn the largest quantity. For females, a deduction is to be made, according to circumstances, about one-fourth or one-fifth part. But

however perfect this table may be considered in ordinary cases, and although we must carefully take into consideration the age, constitution, and habits of life of the patient, yet we must also be guided by the indications pointed out by the symptoms present. In acute and violent diseases particularly, the minuteness in the construction of this table must be dispensed with, as the quantity of blood then to be taken away is to be regulated by its effects and not by measure, for, in such case, were we to wait to deliberate on any precisely fixed rule, such deliberation would produce nothing but apprehension, delay, and a most dangerous indecision. For instance, it may sometimes be necessary to draw off 30 instead of 16 ounces.

The age of 21, the adult age as it is termed, or the age of full growth, respecting stature, is, very generally, assumed as the age for the full quantity, yet it is well known, that, after this age, the bodily strength continues increasing, requiring the loss of an increased proportion, which is, and must be attended to, but is commonly adapted in a very vague and indefinite manner. On the other hand, though in the treatment of diseases, the age of the patient is a leading point to regulate our conduct in the employment of blood-letting, it should be in relation to the *powers* of the individual rather than to his age, of which, if we judge medically by years alone, we take a fallacious guide. From 30 to 35, man is in his highest vigour, and from this last period to that of 50 years, the solids have still lost nothing of their strength; but beyond this age, the meridian of life is past. The powers of the system begin to flag, and its former energy to gradually decay. Morbidity, or deranged structure, in consequence of imperfect mutation, is liable to take place, as ossification of arteries, thickening of parts, &c. The nervous system is less excitable or susceptible of impressions to what it has hitherto displayed. The system

is affected in two ways by plethora. The arterial fulness, or plethora, which distinguishes youth, has now passed to the venous system, where the blood is retarded and accumulates in different parts.

Between young and aged subjects a striking difference exists, relative to their capability of bearing determinate losses of blood. In the former the arterial is more acute and ample than the venous system, and when large quantities have been drawn in a short period, the energies of the general system, if the disease be removed, speedily restore the strength,—but in the latter, the same treatment, even if it removed the disease for which it was resorted to, would not unfrequently occasion an irretrievable debility, the system for want of innate vigour, not being able to renovate again; and therefore, in simple fevers particularly, aged should never be depleted so much as young persons. Yet in certain aged people, as well as in young subjects, the blood abounds too much with red particles, producing increased heat or fever, and irritation of the brain: in this case we extract blood for the purpose of lessening the quantum of red particles in the circulating mass.

But it is the age of 60 which is generally fixed upon as the beginning of senility, or old age. About this period some mark of bodily infirmity usually appears, and the skilful medical observer may unquestionably be able to detect the first serious aberration from health. I may notice, first, that at the period when inflammation occurs, and where bleeding may be indispensable as a remedy, it will be necessary to attend with guarded caution to the quantity and quality of the blood; secondly, old age is not unfrequently presented labouring under fever, with determination to some of the viscera, more particularly to the brain, which fever is successfully treated by blood-letting and cathartics. This shews that advanced age and debility are no arguments against the practice of depletion

if properly conducted ; indeed, the quantity (from 5 or 6 to 10 or 11 ounces) of blood which seems necessary to be taken away, is so small as to remove all apprehensions of danger from this evacuation. In like cases, physicians often apply 6, 8, or 12 leeches to the temples, by means of which more blood is lost, yet the benefit derived is comparatively trifling ; thirdly, I wish it to be particularly observed, that the later stages of human life are frequently abridged by unsuitable diet, or prematurely ended by disorders which are not treated with sufficient attention by the faculty. Old men, says Hippocrates, have less sickness than the young ; age produces a diminution of sensibility,—and “it is highly probable that when acute “inflammations prove fatal, the vitality of the system “is destroyed, as it were, before the attack.” It is a vulgar error to regard the termination of advanced life the inevitable consequence of time, for the immediate cause of death in old persons is, in general, some well marked disease. To the discerning practitioner many incipient disorders may be discovered in the state of the stomach and its dependencies, and the condition of the blood and its vessels. Living full and taking little exercise, accumulate blood beyond the equilibrium. The vessels over-distended, the blood contaminated, the digestion impaired and consequent crudities intermixing with the materials of the blood, obstructed bowels, and all the dangers which result from impediments to that source of keeping the body pure and wholesome, are to be reckoned the leading causes of many disorders ; and, by a scrupulous attention to these points, the commencement of a disease may be detected. A dislike to a loss of blood generally prevails among aged people, and this prejudice is imprudently sanctioned by inexperienced physicians. The feebleness, coldness of the extremity, indigestion, &c., concomitant on old age are frequently the consequence of an overloaded state of the blood-vessels

compressing the brain, &c., and in such cases, the loss of blood, removing a mechanical cause, is almost an immediate acquisition of strength, and the patient expressing his genuine feelings remarks, that a weight has been taken off the springs of life. The circulation becomes more free, and the heat of the body is increased. Of the preventive and curative remedies, the most efficacious are cathartics and blood-letting, and the truth of this, every aged person of a full habit, who has experienced their effects, will allow. Blood-letting, however, requires to be skilfully directed, because if the system be not overloaded with blood, it may bring on a dangerous degree of weakness. In returning to the first assertion, that diseases, and not the mere exhaustion of age, are the ordinary causes of death in elderly people, it might be advantageous to recapitulate those of the most fatal tendency, the seeming origin of them, and the remedies which medical skill has discovered for their prevention and cure. Apoplexy, palsy, or inflammation of the chest, arising decidedly from repletion, require vigorous bleedings, strong cathartics, and abstinence. The same disorders, when produced by intemperance or injurious diet, require evacuants and correctives. Erysipelas, carbuncle, or gangrenous inflammation, arising from surfeit in the stomach, or from foulness in the bowels, must be treated according to their ascertained causes. Arthritic or gouty complaints, which are aggravated and maintained by improper diet, can be remedied only by adapting a diet that is exact and appropriate. At the same time the great excretory outlets of the body, the bowels of the urinary passages, with all their connections, must be invariably watched; and when interrupted, they must be timely aided by art. While I desire to rouse the attention of my fellow practitioners to those momentous but too much neglected cares and duties, I venture to solicit the confidence of the elders of our race, and their friends, toward the medical

profession, with the full assurance that the faculty now possess the means to prolong life, and alleviate suffering, under many of the events of old age.

The mortality among the young of the human species might appear to prevail to an *unaccountable* degree were it not clear that many of their maladies arise from mismanagement; and even when a disease communicated by contagion, terminates fatally, it may be always traced either to an unhealthy constitution, from the same cause, or to unappropriate medical treatment. Some people are of opinion that the disorders of children are simple, and may be treated by almost any one; but surely in this they are greatly mistaken, for the fact is, they are, for the most part, acute. There are others who imagine that little can be done for their complaints, but as to this, having for some years practised in the different branches of the profession, and thereby having had extensive opportunities of closely investigating and narrowly watching them from the hour of their birth, I can assert positively that a great deal of good might be done for them, and that by appropriate treatment at the beginning most of their diseases may not only be relieved, but actually removed. But they too often obtain a dangerous ascendancy from their approaches not being early recognized, when a judicious treatment will prevent serious mischief. It is therefore the duty of every honest man strenuously to oppose the present erroneous system, in whatever shape or form it may appear; and Lord Bacon very justly observes “that medicine not founded on philosophy is a fallacious and dangerous art.” It is a great error to consider the medical education of a practitioner completed when he commences practice; he should continue to watch diseases, and the effects of medicine with as much attention when he is his own master as when he was a pupil; and therefore I apprehend that one great source of fatality among infants and children, particularly in England, may be traced to what his Lord-

ship might have denominated the unphilosophical monopoly system. The juvenile physician, as soon as he has finished his terms, or number of years prescribed for his residing at some University, and without a practical knowledge of diseases, commences a new career by entering into a combination with the apothecaries, surgeon-apothecaries, and also even with the surgeons, to monopolize the practice of medicine, by binding themselves by a *bond* of faith and good fellowship to practice on certain defined conditions, and for that purpose strongly recommend each other! It may indeed with truth be said, that wherever such a system exists medicine must be at a very low ebb. The physician takes the lead, no matter how little his experience, and is to guide and direct, no matter whether he ever saw the disease in all or scarcely any of its different stages, the practice of the surgeons and the apothecaries, by whom he is extolled, for obvious reasons which may hereafter be more fully enlarged upon, as a most able practitioner. The patient who consults him goes to the fountain head, and all that art can accomplish will be done for him, is the general cry of the servile partners. The physician, who soon becomes a fashionable prescriber, of course recommends his friends in similar terms, one good turn deserving another! This medico-sympathy, however, is not only a very effectual method of foisting unexperienced physicians upon the public, but of keeping them in a state of ignorance respecting the nature of infantile diseases and the sources of their various combinations. Their opportunities of fully and accurately investigating them in their rise, progress, changes, connections. &c., is by far too much abridged; from defect of ocular demonstration, they cannot discriminate their several different stages; they mistake one for another; hence the many crude and contemptible theories which issue from them on these matters; also the great diversity of sentiment which exists among authors respecting the

treatment. The public should therefore be aware of the consequences of encouraging and supporting such medical combinations, They may impose silence upon unenlightened reasoners, or strike others with awe and submission ; but that they are calculated to benefit mankind, or for the dignity and promotion of medical science, I positively deny. Very many of the faculty not only see the error, but acknowledge that they are heartily tired and disgusted with *their* trading concern ; but they are fearful to speak out, and experience it to be most to their own advantage to take the world as they find it. This fear, however, I am happy to say, is fortunately not the case with all.

Blood-letting in inflammations of the lungs or of the head of children is often imperiously called for, and as much may be safely attempted in the first stages, the practitioner is highly culpable, who neglects to avail himself of every favourable occasion which they offer ; but I am aware it is often employed with the most vague notions respecting its necessity, especially in those infantile affections, which at once implicate the lungs, the head, and the first passages. The latter of those require assiduous watching, and, whilst it is of the utmost moment at times to unload the blood-vessels, and to act powerfully upon the intestinal canal, much circumspection is requisite that bleeding be not carried beyond a certain point, lest we induce an irrecoverable condition of both topical and general debility, and thus bring on the very effusion and disorganization, which it is the object of practice to obviate. But the difference of opinion which prevails on the subject of *general* blood-letting in the acute affections of young children, is very great, some recommending and others censuring the measure. In this, as in all medical controversies, we must attempt to separate our prejudices and partialities from those established principles which an unbiassed experience has instituted. General bleeding,

Sydenham asserts, may be as safely employed in young children as in adult persons; and he proves its efficacy in those by having used it successfully in peripneumonic fever, in convulsions from dentition, and in severe cases of whooping-cough. On the whole, however, though the depletory practice has supported its ground with some practitioners since the time of that illustrious physician, many have abandoned general for topical blood-letting in very young children; and the change is not confined to any particular disease, but has been extended to most of the acute complaints of such subjects. We might naturally imagine, that this change, sanctioned as it appears by numerous authorities, was a substantial improvement; notwithstanding, perhaps a candid enquiry would prove, that if bleeding was too much neglected by the older writers, the modern have committed an analogous error relative to general blood-letting in young children: and I have no doubt but it will be found and acknowledged, that in some cases general is better than local bleeding, and *vice versa*, whilst again an union of both may be best. In every acute seizure of visceral inflammation of young children, in the first instance general should be preferred to topical bleeding, for the impression it makes is greater on the universal excitement, and on the local affection; but in the less urgent attacks of disorder, where there seems to be rather augmented determination to, than actual inflammation in an internal part, possibly local extraction of blood is superior. Moreover, as in young children of a delicate habit the latter may be preferable, so in those that are robust, the former has the most decided advantage; and both may frequently be resorted to with excellent effect, where the violence of the symptoms denote the vital necessity of instantaneous relief. An expert surgeon will scarcely ever be baffled in bleeding young children; because if a vein cannot be sufficiently discovered at the bend of the arm, or at the back of the

hand, a branch of the temporal artery, or the external jugular vein, may readily be opened, more particularly the latter; and indeed the external jugular is often by far the best place to bleed children, when we wish to free a vital organ from repletion by a speedy detraction of blood. If the operator can secure the external jugular vein from rolling, he may at once penetrate it through the integuments, or the integuments lying directly over the vein may be first drawn up between the fingers, and then cut transversely, the better to expose this vessel; after which it should be pierced longitudinally, at the same time pressing the vein with the thumb a little below the opening. When an efficient portion of blood has been drawn, the vein must be carefully secured, and often examined afterwards, especially if the child be restless; because owing to an omission of such precautions, it sometimes bleeds again very profusely and dangerously, particularly when children are neglected in the night. A professional gentleman bled a child, that laboured under the croup, from the external jugular vein; and afterwards the difficulty of breathing continued so great as to force the blood out repeatedly from the orifice, though compresses had been attentively applied. At last he passed a very fine needle through the incision, which he closed with the twisted suture, after the manner that the veins of some of the inferior animals are secured. This answered the purpose perfectly. The child, however, had previously lost an excessive quantity of blood, but it ultimately recovered. In opening the external jugular vein in children, we should never cut the vessel across, as this would perpetually expose them to the risk of hæmorrhage; but this will seldom be the case, if it be divided longitudinally.

It now becomes a natural and important question, how much blood should be taken away in the inflammatory disorders of young children? To impose a rule correctly applicable to every case is impossible. At the comple-

tion of the first year, three ounces may be reckoned a moderate bleeding, four ounces at that of the second year, and five at that of the third ; but a child who has passed his fourth year, and has been tolerably healthy before, will bear general bleeding much better than prior to that period. Some practitioners draw blood much more copiously than above mentioned in the inflammatory affections of young children ; and on some few occasions, when the symptoms have been excessively violent, I have myself gone considerably farther with benefit. It is absolutely one of the nicest points in the practice of medicine, to bleed young children judiciously when attacked with inflammation of the viscera ; because if we stop too short, the inflammation goes on and destroys them ; whereas if we advance too far, the excess of depletion is destructive, though the inflammation may be subdued by it. The young constitution differs from that of the mature in having a more intimate and exquisite affinity, by consent, between the sanguiferous and the nervous systems ; so that effects more powerful are caused from depletion in one system, and from irritation in the other, than are observable in adults. Nervous irritation hurries the circulation more in children than in men ; and loss of blood occasions more irritation in the first than in the last. Now we seldom or ever witness children labouring under any inflammatory affection without at the same time the nervous system being highly irritated ; and it must be invariably borne in mind, that we have a double object in view—the first to check the inflammation, and the second to calm the irritation. It is on account of this mutual affinity, that moderate bleedings are usually so beneficial, and large ones often so injurious in the inflammatory fevers of children ; because the former stops the inflammation without enlarging the irritation ; whereas the latter augments the irritation to so exalted a degree, that it frequently exhausts the vital energy. By attending minutely

to the pulse of a young child subsequently to moderate bleeding in an inflammatory complaint, we shall feel that it is generally calmer than before ; but after profuse phlebotomy, it will be found tremulously rapid, the entire system participating in the nervous agitation. Hence it is of vast importance to keep children as tranquil as possible after bleeding, and should considerable irritation supervene, it ought to be allayed by the tepid bath, or by an opiate ; indeed where very great irritation follows phlebotomy, I have for years been in the habit of administering a few drops of laudanum, with a little light food afterwards, and have ample reason to conclude that many children may be saved by this means. Sir Arthur Clarke, M. D. of Dublin, author of an Essay on Bathing, &c. &c., has recently published, in a popular form, the result of his long experience and observations on the origin and cure of the diseases of infants and children, under the title of “The Mother’s Medical Assistant.” Although I do not concur in every instance with Sir Arthur’s doctrine, and think that in some cases his medical treatment might be much improved, yet I can confidently assert that he has highly distinguished himself as a man of science, and as a *practical* physician ; and that his work not only contains much valuable information, but is the best popular treatise of the kind extant. I am sorry that my present limits will not allow me to proceed farther, but I hope and trust shortly to be enabled so to do.

Equal attention should be paid to the *constitution* and *condition* of the patient. We are often cautioned against blood-letting, except when the patient is of a full plethoric habit, and robust constitution ; but experience convinces me that it is accompanied with the most decided benefit, even when employed on subjects of a contrary description. In attenuated, delicate and highly complexioned subjects, the blood is proportionally more plentiful, whilst in full and bloated people there is more bulk

of flesh and fat, the latter have likewise more slender blood-vessels, and the circulation of the fluids is carried on more slowly than those who have a well defined muscular system; this is the reason why thin people bear bleeding better than fat, I mean those who are constitutionally thin, and by no means those who are so in consequence of disease; upon the same principle we take less blood from the citizen than from the inhabitant of the country.

A morbid state of the constitution claims equal consideration; cachectic subjects, according to some writers, are seldom liable to phlegmasia, and have a stronger tendency to a malignant degeneracy, they are therefore as scrupulous in bleeding them as they would be with scorbutic, scrofulous, or venereal subjects, who, according to the same writers, are as rarely the subjects of true inflammation.

Nothing certainly concerns the idiosyncrasy and habits of the patient which does not merit consideration; we find some people, all of whose disorders partake of phlegmasia; thus we see them, if attacked with catarrh, having an inflammatory cynanche; this particular disposition diminishes as they advance in age; but so long as any traces of it remain, we should bleed such a patient less scrupulously during his acute disorders.

Respecting the custom of bleeding frequently, I may observe that the habit of evacuation of blood, whether spontaneous or artificial, always rendering more easy the reparation of the loss, gives at the same time a greater degree of irritability to the sanguiferous system, so as to render it surcharged by a quantity of blood, which it otherwise could have easily borne. For this reason we must always consider such persons in a state of plethora, and in doubtful cases of fever, as supporting blood-letting better than others.

REPETITION OF BLOOD-LETTING.

Before determining upon a second bleeding, the physician will attentively study and recognize the character of the disorder, and then examine with equal care, the state of the strength after the first evacuation. I say he ought to have studied the character of the disease, because it is needful that he should act very differently in the different stages of inflammatory fevers, as well as in pure inflammatory disorders, and where it happens that the patient in either stage, may fall into a fainting fit on the first bleeding, though very sparing, afterwards bears very well more profuse depletions.

We shall scarcely ever have occasion to regret when we bleed at the commencement of inflammatory diseases ; but when we venture upon general phlebotomy late, we most frequently risk whatever chances of recovery may remain. At the onset of inflammatory disorders we operate on vantage ground, and may proceed boldly ; but our position is reversed in the last stage, and great caution is then necessary at every step. The strength is unsubdued in the first stage, it is exhausted in the last. General blood-letting arrests the local disorder in the first stage, without debilitating the system further than is requisite for the removal of that disorder ; and the general weakness resulting from the loss of blood is much less than that which the unimpeded disease would have caused, not to mention the tendency of inflammation to derange the structure, or to destroy the functions of the affected viscus. But towards the close of inflammatory disorders, the energy of the heart and arteries, with that of the whole body is wasted from the topical and universal excitement ; and general phlebotomy at that time exerts little or no influence on the local disorder, whilst it has an inverse one on the system at large, which it instantly

and mortally overpowers. Yet between the first and the last stage, and especially in sub-acute inflammations, there is a middle one in which moderate venesection is frequently of great utility: moreover it is a principle of physic, that when any just reason exists for hesitating about the employment of general bleeding, local should always be preferred.

I may lay it down then as an axiom, that if the disease be complicated; if, from the prevailing symptoms, it seems to partake of the inflammatory nature; if the patient has been relieved by the former bleeding; if the pulse continues good; if the symptoms of re-action or impetuous motion towards an essential viscus diminish, and yet the symptoms which demanded the first bleeding still persist to a certain degree, we should without doubt proceed to a second, but always with greater circumspection.

Should, on the contrary, the pulse become feeble, if the strength really sinks, venesection ought never to be repeated; and in all cases of fevers before mentioned, it is unquestionably proper that the physician should consult the pulse even during the flow of blood, for the purpose of immediately assuring himself of its indication; because, if it becomes weak and irregular, and the patient at the same time not relieved but rather more afflicted, it is instantly requisite to stop the blood, for such symptoms seldom admit of abundant depletions: by a too copious evacuation, the action which seems exorbitant may sink swiftly, and the disease from acute as it was, pass into the chronic state. Let then the young practitioner always keep in view this principle, that, while active measures are used in the beginning of most acute disorders, in some of them the healing art consists more in a prudent observation of the progress of nature, and of her salutary powers, than in an useless and dangerous prodigality of remedies; for in every sort of acute fever, nature has need of a certain degree of re-action, as well as of a certain in-

terval of time to alter or surmount the proximate cause of the disorder, and that re-action, if well directed, is frequently alone equal to the cure. In these cases the practitioner may, and ought to confine himself chiefly to observation; but, by no means so, if the re-action be defective, for such febrile affections are never cured by their own efforts. Nor yet should he confine himself if nature departs from the salutary line, or if, which occurs much more frequently, some morbid irritation, primary or secondary, or a morbid predisposition of some organs, disturbs her in her operations, and gives to her efforts a contrary and pernicious direction: it is then that she should never be abandoned to herself, and that she demands imperiously the assistance of art. Hippocrates gives us the narrative of 42 persons attacked by acute fevers: 25 of whom died; none of those who survived it, were renovated to health but by the means of some evacuation: which teaches us in what way nature opposes this kind of disease, and what line the wise physician should hold, who always conducts himself upon these salutary occasions.

But the great and multiplied diversity of opinion on almost every disease will even astonish a PROFESSIONAL reader. The confirmation of this will be more abundantly proved as we proceed, but that the reader may in this place see something of the doctrines and practice of medical men in other countries, I shall now concisely notice those of the West Indies and America respecting blood-letting in *typhus icterodes* or *yellow fever*. By one of those writers in the West Indies, we are told, that the determinations to particular organs, which take place in *typhus icterodes*, and which constitute its greatest danger; the marks of inflammation, which dissections have shewn in the stomach or biliary organs, evidently point out the propriety of this evacuation. He adds, that experience confirmed its utility; for his practice was much

more successful, after he had adopted blood-letting, than before. By way of caution, however, he mentions that it is only in the very early stages he thinks it adviseable to have recourse to the operation; and that if it is not performed as early as the second, or at furthest the third day, he apprehends it will not be successful. Another writer informs us, that he holds a subtraction of blood in a large quantity to be a most decisive process in the more intense and contracted forms of the endemic fever of the West Indies, and that the remedy produces a condition susceptible of being more readily acted upon afterwards by cold affusion, and the other means we may employ. He adds, that whatever may be the precise quantity necessary to produce the effect, it must always be supposed to stand high, and seldom lower than thirty ounces; in strong athletic European soldiers, recently transported to a tropical climate, some times far above it. A third author is of opinion that bleeding may be resorted to in certain cases not only with safety but advantage, and he quotes himself as an example; but he says that the propriety of the operation, and the quantity of the blood to be taken away, must be determined by the circumstances of the patient. That is to say, the propriety, quantity, and repetition of bleeding, will greatly depend upon the strength and fulness of the vascular system; the oppression of the sensorial and other functions; the age, and constitution unseasoned; the effects during, and after, the abstraction; the ardent nature of the fever; and, above all, upon the short continuance of the disease. On the contrary, its employment will be more sparing, equivocal, or altogether prohibited, in the weakly, aged, intemperate, long assimilated, or previously diseased habit; but more especially in an advanced stage of the disease. The efficacy of this remedy, however, will greatly depend upon its being used as early as possible, particularly within the first twelve hours; and although it

may sometimes be extended to double that time, yet its too late or injudicious employment may infallibly hasten dissolution. Under circumstances the most favourable this remedy is recommended to be copiously used, and to be repeated according to its good effects; but much certainty will even then depend upon its being resorted to before the chain of febrile actions is completely linked, and more especially before the stomach and bowels have suffered.

Having thus epitomised the sentiments of three celebrated writers, (Sangrados) on typhus icterodes or yellow fever, I shall now, on the other hand, take the opinions of three equally eminent writers, (Brunonians), who object to blood-letting in this disease.

One of the latter writers observed that no native recovered when the lancet had been used. Another says, that although the blood drawn, in the cases where this remedy was employed, appeared remarkably florid, and always threw up an inflammatory crust of greater or less thickness, and although the pains seemed to undergo a temporary mitigation, yet the consequence, at the expiration of a few hours, was always fatal, notwithstanding the patients were remarkably robust, florid, and generally in the vigour of life. The third writer, in other respects a judicious and experienced practitioner, and who resided many years in the West Indies, fully coincides with the two last, and strongly disapproves of evacuations by bleeding, even although the symptoms may run high at the beginning, and seem actually to demand the taking away a considerable quantity.

From the extensive experience and accurate knowledge we have in the symptoms and terminations of the inflammatory fever of this country, and as the yellow fever which prevails in other countries is of the same species so far as regards its inflammatory nature, although attacking more violently and being of a much greater bilious

malignancy, I am convinced that in the early stage as pointed out by the Sangrados, a general abstraction of a proper quantity of blood from the system will always relieve the disease and greatly lessen the danger.

The nosologist is a kind of a discoverer at second-hand, and frequently considers himself entitled to all the merits of an original. Numerous attempts have therefore been made to divide fever into many varieties, of species and sub-species,—each individual who added another variety insisting on some minute particular in the course of the disease, and magnifying it into a base sufficiently ample whereon to rear his new division. Diseases, however, are not to be cured by eloquence or by names, but by remedies; it is therefore to be regretted that the former have always had a strong influence on the administration of the latter. Wherever a theory of fever has been founded on some specious chain of symptoms occurring in that disease, dressed up in eloquent language, with a due proportion of analogies, possessing any degree of plausible probability, it has been in vain common sense and plain observation of the day has been opposed to it. It was curious to notice how readily the character of the *Pestis Bellica* of the late war was made to bend to the notions entertained in Germany of its proximate cause. A German's head is perpetually replete with divisions and subdivisions; and the typhus that succeeded the immense multitudes of military that for upwards of twenty years traversed and oppressed their country, afforded a fine opportunity of displaying their dexterity in nosology. They gave it the name of *Pestis Bellica*, stoutly contending whether it should be placed among the *Fievres Adynamiques* or *Fievres Ataxiques* of Pinel; and accordingly variously described the nature of the disease, and the effects of blood-letting in it. The celebrated Hufeland, who appears to have escaped some of the delusions of theory that bewildered his countrymen, only to fall into

others, is persuaded that the continued fever, under whatever name it may pass, has ever existed, but frequently with the antiphlogistic, and not unfrequently the phlogistic type; which of itself may furnish an easy explanation why remedies of the one or other description have been in vogue at different times. The war fever, he says, was asthenic till the year 1811, when a *comet, unusual heat and drought, certain solar and electrical phenomena*, converted it into the sthenic form. The works of Sydenham also demonstrate how effectually his theory of epidemic constitutions served to conjure up varieties of epidemic fever, which were quite unobservable to any one but himself and followers, such as Huxam, &c. The biliary theorists, much like the present gastrists on the Continent, saw nothing but *bile* under the skin, and in the stomach and fæces; a phenomenon which we might every day see if we chose to consider a trifling occurrence as the most remarkable event in the disease. Nosologists, or others, in their doctrine of the names of diseases, have certainly on many occasions swelled the list far beyond real utility, and Mr. John M'Leod, in his "Cursory Observations on the Treatment of Yellow Fever," has made on this subject some very proper animadversions. "The symptoms of yellow fever," he says, "have been so often and so ably described, that it may be unnecessary to go over that ground. The various designations it has received—the Bulam, the West India, Philadelphia, or Mediterranean fever, are, in my opinion, founded in error, for its origin can be traced to no particular place. It seems, in fact, to be the ardent bilious fever of any warm country whatever, and, as far as my observation extends, its character is the same, whether in Africa, America, or the Mediterranean, varying a little only in degree of severity, according to the local circumstances, or peculiarity of constitution.

"In hot climates, there is an unusual secretion of bile,

“which, being retained, (perhaps from costiveness), be-
 “comes acrid, and this, added very often to intemperance,
 “fatigue, &c., excites general febrile action, which, if not
 “promptly cut short by *timely* remedies, commonly pro-
 “ceed with great rapidity to a fatal termination. The
 “stomach and bowels, irritated by their acrimonious cor-
 “rosive contents, advance (as appears by dissection),
 “quickly from inflammation to mortification, a state which
 “is generally, but not always, denoted by hiccup and
 “black vomiting, the last and mortal symptoms.

“Having always had this view of the disease, my treat-
 “ment of it has been naturally directed to the immediate
 “removal of its exciting cause, by clearing out the primæ
 “viæ by any purgative which the stomach best retains,
 “and which will act most powerfully and speedily, and
 “by enemata if requisite, subduing at the same time the
 “increased action of the sanguiferous system, by vene-
 “section and the cold affusion.

“It may be right to state here, that whilst I was in the
 “West Indies in 1804, 5, 6, and 7, bleeding was not in
 “vogue. I did not practise it, nor was it necessary, as,
 “before I joined, the men had been seasoned for a year
 “or two, a state of body which neither will bear, nor in-
 “deed requires, this evacuation. Emetics were never
 “thought of, from the great determination they occasi-
 “oned to the head, and from the commotion they excited
 “in the stomach, already too highly irritated.

“Purgatives, with plentiful dilution, and the cold bath,
 “in general sufficed; but I am clearly of opinion, that in
 “men newly arrived from cold climates, venesection
 “ought to be freely resorted to, in addition to other re-
 “medies, on the first attack of this fever.

“I have had frequent opportunities of observing this
 “same disease in the Mediterranean, more especially in
 “a line-of-battle ship, where above eighty cases occurred
 “within a very short period, at the time it was prevalent

“in the fleet, in the summer of 1811, who all, except one
 “or two, recovered by the repeated use of purgatives, the
 “cold affusion and bleeding, in those whose habits seem
 “to indicate it; but I must again remark, that a great
 “proportion of our men in this ship (the Warspite) were
 “habituated to warm climates, which rendered bleeding
 “less essentially necessary than it otherwise would have
 “been. During last summer, 1814, we left the Garonne
 “in the same ship, with upwards of one thousand men
 “on board, including the military, and proceeded to Ca-
 “nada. On the passage we lost two of our men, who,
 “from their situations (purser’s steward and tailor), had
 “constant access to spirits, and were worn out by habitu-
 “al intemperance; but at Quebec, where the danger was
 “greatest, from the excessive heat, and opportunities of
 “being irregular on shore, we did not lose a man, al-
 “though the febrile cases were very numerous. Here I
 “had recourse to venesection much more freely than here-
 “tofore, for I had observed in some cases of the Medi-
 “terranean, that great depletion in this way was not fol-
 “lowed by that debility which is so much feared, and
 “also, the men, from having been two years on the home
 “station, were better fed, and more phlethoric, than when
 “accustomed to warm latitudes. The recoveries were
 “here astonishingly quick, even in those cases which had,
 “at the first attack, every promise of being very violent.
 “On our return homewards in September, we were fre-
 “quently without an individual on the sick list. At the
 “onset of these cases, it was usual to take away from 30
 “to 40 and 50 ounces of blood the first day, carefully at-
 “tending at the same time to keep the bowels freely open.

“Upon the whole, I think this fever may be combated
 “with as great a probability of success as any disease I
 “am acquainted with, provided the constitution is other-
 “wise unimpaired, and, above all, where timely applica-
 “tion is made for relief, merely by the judicious and

“prompt use of the three grand remedies, viz., venesection liberally in all new comers, and where the patient is not reduced by the climate; by cold affusion, agreeable to the rules established for its use; and by repeated purgatives in all cases without exception.

“All this, however, must be done early, to ensure success; and a medical man derives great assistance in this respect from the good discipline of the ship. In such ships I have in general, had the happiness to serve. In *La Pique*, for instance, in the West Indies, which was in unexampled order, the men were examined by the officers before breakfast in the morning, and at quarters again in the evening—any man who seemed heavy or indisposed, was immediately noticed and taken care of. No man in a state of intoxication did I ever permit to sleep with his stomach loaded with new rum; and to all these circumstances I attribute the extraordinary state of health we enjoyed, a very few individuals only dying of this fever, in nearly three years, two of whom, from straggling on shore had not the benefit of early attention.”

The value of the above communication, particularly when contrasted with the opinions of others, cannot fail but to be interesting and instructive. The efficacy of the treatment recommended by Mr. M'Leod is corroborated by numerous other writers not yet mentioned.

Another curious circumstance respecting the unsettled and contradictory plan of treatment of the yellow fever is, that in Philadelphia, Baltimore, New York, &c. some practitioners recommend and adopt the antiphlogistic plan, by bleeding, purging, and a low diet;—some follow the tonic and stimulant practice, administering a liberal use of cinchona (bark), wine, and opium, with the application of the cold affusion;—and others, again, either purged moderately with calomel, or bled on the first or second day of the fever, and then resorted to a free use of bark, wine, lau-

danum, and aromatics; this practice they adopted merely on the supposition that the disorder was a species of increased synochus; highly inflammatory in its first stage, and highly putrid in the last. This last mode of treatment was scarcely more successful than the tonic and stimulant one; and that said to succeed the best was, the antiphlogistic, pursued even to a degree of extreme rigour; for we are given to understand, that although in some instances one or two moderate bleedings was allowed sufficient, still, in most cases, the operation was repeated much oftener.

As a preventive, however, blood-letting is by some recommended to be adopted during the voyage or previous to Europeans landing on the coast of these countries subject to yellow fever; but this advice is at the same time accompanied with a strong caution most rigidly to guard against the use of the lancet immediately the disease has commenced its attack, and they give many seemingly proofs that in no case even of new comers is blood-letting productive of advantage; but, on the contrary, in most cases of much evil: and that even in young men, of a sanguineous habit and vigorous constitution, the powers of life it is said, have been so much exhausted and weakened by the loss of a few ounces of blood, as not again to be roused into action.

These unfavourable occurrences I should suppose must have taken place in consequence of bleeding at an improper time, as in the cold or collapsed stage of the disease, as before mentioned in my outline to typhus; or it must have been at too late a period of the fever. But how many lives may have fallen a sacrifice, unintentionally of course, to the foregoing vascillating and contradictory treatments, I shall leave the reader to conjecture. I shall introduce many other interesting opinions on this subject, given by other authors, which will be brought forward when I come to treat of yellow fever

under its own specific head, when the whole shall then be regularly summed up.

The following observations, however, relative to the yellow fever, written in Guadaloupe, in 1816, by M. Le Docteur Vatable, Physician to the King of France, dated Basseterre, February 22nd, 1817, will afford a specimen of the opinions and practice of French practitioners. "For several years past," says the Doctor, "the yellow fever has become an object of general attention ; its annual return into the principal towns of the United States ; its ravages in the Antilles, where it has destroyed whole armies of recruits ; its appearance in Spain and at Leghorn, whence it seemed to threaten the rest of Europe—these considerations have called for the interposition of governments and the investigation of physicians. The fever most commonly appeared at night or towards morning, some hours before day. No previous symptoms of its approach gave signal of alarm, but its attack was sudden, in the apparent enjoyment of the best health. The following, however, were the symptoms that attended it: violent pains in the head, the same in the upper regions of the belly, (epigastrium), more sensibly felt on touching it, the same also about the loins, bitterness in the mouth, the face discoloured, a yellowish mucus on the tongue, nausea, vomiting a yellow or greenish substance, diminution of the moral powers, an expression of uneasiness, alarm, and dread on the countenance, sleep little or none, or if any, troubled with frightful dreams, *a vast difference in the beatings of the pulse, sometimes full, strong, and hard, as in inflammatory affections ; in other subjects, quite the reverse, and frequently resembling a state of health ; in other cases uncommonly slow.* Deaths usually between the fifth and ninth days, seldom after that. If the seventh day passed and the accidents were moderate, a fair prospect of recovery offered. The convales-

“cence would sometimes be prolonged to the twentieth day.
 “The crises were seldom by sweat or urine, most com-
 “monly by the intestinal evacuations. The vomiting of
 “black matter, passive hæmorrhages, the icterus before
 “the seventh day, and the coma, were sinister prognos-
 “tics: but the suppression of urine on the fourth or fifth
 “days was the most fatal. None of the patients survived
 “this accident.

“With respect to the methods of cure, gentle purga-
 “tives, cassia, manna, tamarinds, acidulated tartrate of
 “potash, oil of palma christi, during the first, third, or
 “fourth days, were attended with moderate evacuations
 “that proved beneficial. Tisans or diet drinks, acidula-
 “ted with bitter orange or citron, which they took with
 “pleasure were the common beverage. These served to
 “diminish the nausea, to cool the internal heat, and allay
 “the thirst. Towards the fourth or fifth day laxatives
 “were discontinued, and bitter drinks were substituted.
 “A slight infusion of quinquina, of camomile flowers, of
 “wild succory leaves, with a few spoonsful of old Ma-
 “deira, were then of service. Sometimes the patient was
 “allowed light food, as rice-creams, bread or sago. These
 “means, as the symptoms grew less dangerous, helped to
 “strengthen the digestive faculty which had suffered the
 “most by the disorder. This debility did not terminate
 “with the fever; it lasted during the convalescence, and
 “sometimes brought on a relapse more violent than
 “ever. In this case, the use of bitters was continued,
 “especially of the quinquina. The tonic effect of these
 “was seconded by promenades on horseback or on foot,
 “morning and evening in fair weather, but the recovery
 “was much accelerated and the danger of a relapse obvi-
 “ated by quitting the town and retiring to the *mornes* or
 “higher districts. *Bleeding was seldom practised*, and
 “only in cases where a strong excitation of the vascular
 “system in robust and plethoric constitutions occurred.

“Emetics were not employed, nor *drastics*, though the
 “latter have been eulogised by Dr. Benjamin Rush, of
 “Philadelphia, and certain English physicians. Sedatives
 “and demulcents were the only medicaments of this de-
 “scription that I *durst* make use of. After all, to speak
 “ingenuously, though it is a humbling and afflictive avow-
 “al, in the very violent cases of the yellow fever, what-
 “ever methods were employed, the consequences were
 “the same, and occasional success, from time to time,
 “could by no means console the physician for the regret
 “of witnessing the general impotence of his art, and the
 “speedy destruction of his patient.”

H. D. Hamilton, “Medical Practitioner,” has announced
 his intention of speedily publishing the Principles of Me-
 dicine written entirely on the plan of the Baconian phi-
 losophy, to prove that the only rational method of curing
 diseases, is to induce, by medicine, an opposite or coun-
 teracting action, sufficiently powerful to expel the disorder.
 But it will be seen by the foregoing extracts, that
 M. Le Docteur Vatable, Physician to the French King,
 in his plans of treatment of the yellow fever, is neither a
 Sangrado nor a Baconian philosopher, and some will be
 apt to think that they were not very well adapted to ob-
 viate “the regret of witnessing the general impotence of
 “our art, and the speedy destruction of the patient.”
 Par M. Le Foulon, Docteur en Medicine de L’Université
 de Montpellier, residant cidevant à la Guadeloupe, et
 maintenant á Nantes, in his “Essai sur les Fievres Ady-
 “namiques en general,” published at Paris, 1816, appears
 to depend principally upon the use of Peruvian bark and
 cordials in the cure of the West Indian epidemic. Ac-
 cording to circumstances, he administers the former in a
 state of infusion, powder, or extract. The following for-
 mula, in his own language, is a specimen of his practice.
 Speaking of a tincture to be had recourse to as a kind of
 dernier resort, he observes

“Voici la véritable composition de cette teinture :

R. Du meilleur quinquina pulvèrisé, oz. 4.

De L'écorce de citron de Portugal, oz. $1\frac{1}{2}$

De racine de serpentaire de Virginie, dr. 3

De safran d'Angleterre, scr. 4

De cochenille scr. 2

D'esprit de vin de France, oz. 20

“Faites infuser de tout dans un vase bien bouché, pendant trois ou quatre jours au moins ; coulet ensuite la “liqueur.”

Ingredients from all parts of the world compose this farrago which is directed to be taken in doses of a spoonful every hour, mixed with an equal quantity of red wine ! Cinchona, opium, &c., are no doubt sometimes of utility in the last or stage of collapse of the disease, and most practitioners speak favourably of them, especially the latter, but I trust none of my readers will be led to rely on them alone through the progress of the disease. Indeed when their use is indicated in the fevers of hot climates, the patient has already in general passed the limits of recovery.

In the preface I have stated that the chief effects of febrile phenomena on the vital organs had been calamitously overlooked, even by our best systematic writers, and this assertion may be verified by observing the sentiments, on this momentous and highly interesting subject of the deservedly celebrated Dr. Beddoes, who says, in a letter to Dr. Darwin, respecting his Treatise upon the Laws of Animal Nature, “As you have done so much, “have you not given us a right to expect the only thing “that seems to be wanting to the perfection of your system in a practical view ? And this is, an account of “such conjunctions of symptoms, as require a particularly “nice treatment. For instance, I was informed by a “medical student, that a typhus accompanied with a se- “vere inflammation of the lungs and pleura, proved fatal

“to every single patient in the Edinburgh Infirmary, two
 “or three winters ago ; and they were not a few. Have
 “you not observed unusual concurrences of morbid phe-
 “nomena, and ought they not to be described like other
 “monsters ?” These remarks exhibit a convincing proof
 how many fortunate coincidences of genius, of observation,
 opportunity, and combination are requisite, to complete
 a discovery in the phenomena of animal nature. Some
 years afterwards, on the appearance of Dr. Clutterbuck’s
 observations on the primary seat and inflammatory nature
 of idiopathic fever, which he contends is in the brain, and
 that it is nothing more nor less than a species of phrenitis,
 or topical inflammation of the brain ; the active and in-
 quisitive mind of Dr. Beddoes was again more particu-
 larly excited to the subject, and in the year 1807 he pub-
 lished a valuable treatise on fever as connected with
 inflammation, which will be more fully noticed in the
 subsequent pages. Dr. Clutterbuck has remarked in his
 preface that “physicians neither agree among themselves
 “as to what fever is, nor in what it essentially consists ;
 “nor have they assigned to it any certain and determi-
 “nate seat.” He is here somewhat under a mistake.
 Dr. Rush, in his time the most eminent physician of A-
 merica, long ago proposed a theory of fever more simple
 and determinate, perhaps, than that of any of his prede-
 cessors. He asserts that fever, whether it appears in the
 head under the form of phrenitis, in the lungs under the
 form of pneumonia, in the liver under the form of hepa-
 titis, &c., is still an unit ; that these various local affec-
 tions are all symptoms only of an original and primary
 disease in the arterial system, and in the irregular or
 convulsive action of that system, he contends that fever
 consists. Numerous are the writers, who, in all ages,
 have successively exerted their talents in pointing out
 what each conceived to be the proximate cause, or es-
 sential nature of fever ; some supposing it to consist in a

noxious matter, introduced into, or generated in the body, the increased action of the heart and arteries being an effort of nature to expel this morbid matter; others offering it as their opinion, that it consisted in an increased secretion of bile; and others again, that it is to be ascribed to a spasmodic constriction of the extreme vessels on the surface of the body, which, indeed, was the doctrine taught by the late Dr. Cullen. Dr. Currie imagines *debility of a peculiar kind* to be the first operation of the remote cause producing fever; the necessary consequence or concomitant effect, is, he thinks, a spasm or contraction of the arteries, but more especially of the extreme vessels and capillaries of the surface; hence follows an accumulation of blood on the heart and lungs, the reaction of these organs, the separation of morbid heat, and morbid association. The ground of this theory is indeed nearly the same with that of Dr. Cullen, resting, however more fully on morbid heat, and admitting into the chain of operation an appendage of morbid association. Dr. Wilson Philip, in the preface to his fourth edition of a Treatise on Febrile Diseases, also strongly supports this erroneous notion of a peculiar debility being the common cause of fever. The Doctor further says, that “if in any part the vessels are *weaker* than in others, they suffer a greater degree of morbid distension than the rest. Hence arise the congestions and inflammations so frequent in fever.” Now, I am fully persuaded, that instead of making use of the word “weaker,” as Dr. W. Philip has done, it would have been more correct, and infinitely better for the general good, had he substituted the words more irritable or tender, as I have before stated on the nature of fever and inflammation. “I cannot,” says the Doctor, “agree with Dr. Clutterbuck, that fever is always supported by a determination of blood to the brain, because I see fevers where neither symptoms nor the appearances on dissection show any particular determina-

“tion ; and others in which the particular determination “is evidently to other parts than the head. Nor can I “agree,” Dr. Philip adds, “with Dr. Armstrong, that such “determinations exist chiefly if not wholly in the venous “system. I conceive them,” says Dr. Philip, “to exist “equally in the arteries and veins. However,” says he, “I cannot help thinking that the public is greatly indebted “to those late writers who have done so much to direct “our attention to these local affections, when they do “occur in the treatment of fever.” Certainly since Dr. Clutterbuck’s excellent speculative work on fever was promulgated, the attention of pathologists has been forcibly directed to the examination of the brain, in their anatomical researches into its seat and nature ; and it may be considered as a circumstance strongly confirmative of the correctness of that gentleman’s ideas, that morbid appearances of the brain are now described as existing in a far greater proportion of cases than formerly. It will, however, be seen that physicians are not unanimous on this head. By Dr. Mills, of Dublin, in an useful essay, wherein the utility of blood-letting is placed in a striking and very advantageous point of view, an arrangement of the varieties of typhus fever is proposed from the organ principally affected, seemingly on the principles mentioned by Dr. Rush, and which he denominates its seat. Sentiments approaching in some measure to those of Dr. Mills have been published by Dr. Armstrong, in his judicious and discriminating “Illustrations.” There is, however, one point of difference of some importance in a theoretical light. While Dr. Mills avers that there is no fever without local inflammation, Dr. Armstrong expresses his conviction that “inflammation is *not* its inseparable and essential constituent ;” and afterwards concludes, that, fever being a disease of simple increased excitement, inflammation, if it comes on, is to be regarded as a consequence, and not a cause. Having already

given an outline of my own views of the pathology of fever and inflammation, to further investigate the foregoing different hypotheses, would lead me into a train of theoretical reasoning and conflict, inconsistent with the plan of this dissertation. The respectable authors, however, here alluded to, will, occasionally, necessarily be again mentioned, especially respecting their modes of treatment; but I may now remark, that one theory knocks down another; hypothesis follows hypothesis, as wave follows wave. In this contest of opinion, happy must it be for that patient whose physician has the best theory, founded on actual practical experience. I conceive, that that practitioner stands the best chance of success, who calmly and deliberately investigates and prescribes for symptoms as they present themselves, guarding against yielding too much to the influence of any theory, from whatever authority promulgated. Without due attention to this circumstance, our rationale of prescription must frequently be obscured and indefinite. It has before been observed, that it often happens that the fever does not affect every part of the system in an equal degree; the symptoms being less severe in one part of it than another. This, which the young and unexperienced practitioner, and the by-standers in a much greater degree, are liable to think it fortunate for the patient, is, in fact, the very reverse; as has been very justly remarked by Dr. G. Fordyce; the greatest danger in fever being, its not affecting every part of the system equally.

Mr. Terry, a surgeon of Leyburn, in Yorkshire, has made some observations on typhus fever, which, in 1818, proved very fatal in that neighbourhood. He says, "I have seen most of the remedies recommended for the last few years, fully and fairly tried. I have seen *all* succeed, and *all* fail. I always bleed on the onset, when the patient complains of much pain, wherever situated; then I open the bowels very freely with calomel and jalap,

“which in some cases put an end to the disease; if not, calomel and opium, at bed-time, and salines, with antimonials, during the day.” This practice I suppose Mr. Terry found the most successful. But his statement would have been more satisfactory and instructive if he had mentioned the number of deaths under this, and compared it with the other kinds of treatment. I could wish to prevent blood-letting being brought into disrepute, and must therefore observe, that it is not enough to say that a patient was bled at the onset of a disease. A great deal depends on the skill and judgment of the practitioner in adapting it to the particular indications and circumstances of the case, as will be seen from what I have stated under the head of typhus in this dissertation. It may, however, appear somewhat strange that the most diametrically contrary plans have succeeded in fever, and been held by their supporters as infallible. Many have therefore conjectured that were fevers left entirely in the hands of nature, as many would recover as would have done under the most skilful treatment. Whatever seeming reality there may be in this, it is scarcely reasonable to suppose that nearly the same proportion recover under all sorts of treatment. Under *judicious* modern means, unquestionably not only a greater proportion recover from the graver types of fever, but a vast number of fevers are prevented from running into the more dangerous forms. Hippocrates, one of the best observers of nature, considered disease to be only a disturbance of the animal economy, with which nature was at perpetual variance, and using her utmost endeavours to expel the offending cause, but properly speaking, in fevers at least, to restore the balance of the circulation and sensibility, which process is denominated by physicians the *vis medicatrix naturæ*, a term to express that healing power in an animated body, by which, when diseased, the body is enabled to regain its healthy actions; and, in short, I conceive, that by adopting

proper curative means, which involves a forcibly grappling with morbid action, and assists nature in her innate efforts, at the commencement of these alarming diseases, they may be for the most part readily divested of all their terrors. It is true nature may not always aim aright in the removal of all diseases. Dr. Armstrong is of opinion that fits of convulsion and shivering are means employed by nature to lessen, or remove, venous congestion at the beginning of fevers; but the reasons which he urges in its support are regarded by the Edinburgh Medical and Surgical Journal as very vague, and the opinion itself, as seemingly wholly conjectural. In the review of Dr. Parry's Pathology, in which work a similar opinion to that of Dr. Armstrong has been advanced, the editors of this Journal remark, that "it is one of Dr. Parry's fundamental positions, that most of those movements, constituting what is called disease, and which, for the time, produce disorder of the different functions, whether of the body or mind, are, in reality, processes, the general tendency of which is to restore, and to prolong life. But of the general truth of this proposition, though doubtless it is correct in some cases, we entertain very great doubt, or rather actual disbelief. We are in the habit of thinking that the final causes of a great majority of the diseases incident to humanity, is to be sought for in the direct appointment of Providence; and that those diseases, like other physical evils, are intended to fulfil certain inscrutable purposes, both moral and natural: of the latter, perhaps, the only obvious one is, the removal, from this stage of existence, of the successive generations of mankind, in order to make way for others; and thus give effect to that law of *change* which rules the whole animated kingdoms of this earth.

"Besides, the elements by which we are surrounded often excite disorders both painful and dangerous; which, so far as we can judge by the event, are by no

“means productive of any indirect or ulterior advantage
 “to the general constitution, but often indeed, the very
 “reverse.”

No doubt these observations are incontrovertible truths, yet in the whole animal economy we discover marks of the wisdom of the Creator, but perhaps in no part of it more than in the safeguards against disease, and in the existence of a sympathy of equilibrium. And it is certain that when in febrile diseases, either at their commencement, or in their progress, the temperature of the body, particularly in that species of fever which has been by some termed the low nervous, falls below the natural standard, we have the means by the warm bath and other remedies to assist in rousing the torpid and languid system, and when re-action exceeds its salutary bounds, either in excess or irregularity, we have by other means the power to check and regulate it. But the proper treatment of typhus and other fevers, as well as visceral inflammations, which are certainly the most prevalent of all complaints, is undoubtedly both medical and surgical; and, for the insurance of a general successful issue, the adoption of this mode is absolutely necessary to be fully *understood* and *practised* by the person *first* consulted. Therefore this plan I strongly recommend, and hope every chiro-physician* will adopt the same, and throw aside those foolish and absurd professional formalities, at every opportunity that may present itself to him, being well assured, from long and ample experience, that the principle is good, and the mind and life of the patient generally are not thereby kept in suspense and danger. The time is fast approaching when the public must see and be fully convinced, as many people already are, of the very superior advantages of this mode, and the folly of the contrary practice. Indeed I am here again as-

* A physician *practically* acquainted with surgery, &c.

sured from much observation and reflection on the subject, that was every medical man properly acquainted with the treatment of fevers and inflammations in their early stages, few people comparatively speaking, would fall victims to these diseases, and that the lives of thousands and tens of thousands might be saved. But people, and the *English* far more than any other nation, trifle away the best time for curing diseases under the vague, unaccountable, and egregious error of relying upon the usual mode,—a *consultation* with some fashionable non-chiro-physician when the disease becomes dangerous! It is impossible there can be a more fatal and lamentable mistake, because it is during the first three or four days only, when the above successful treatment can in general be of much avail: let this fact be borne in mind; for it well deserves the attention of the humane and enlightened, and may help to explain more than at first sight might be expected. And again, that pernicious phantom of prejudice and false doctrine, DEBILITY OR WEAKNESS, THE CAUSE OF FEVER, which, under various forms, has long haunted the imaginations of physicians, rather than any popular prejudices against decisive measures at the *beginning*, must have actually sacrificed thousands of human beings. On this subject, I shall hereafter have occasion to notice the opinions of many celebrated authors, such as Cullen, Brown, Fordyce, Currie, &c. &c. The two standard writers on fever are certainly Cullen and Fordyce, whose influence has no doubt operated most powerfully from their respectively leading the great medical schools of Edinburgh and London; but I shall also make an extract from Buchan's *Domestic Medicine*, as this book is in the possession of very many, and therefore the more extensively dangerous. Former editions, as well as that for 1817, page 80, say, “Among common
“people, the very name of a fever generally suggests the
“necessity of bleeding. This notion seems to have taken

“its rise from most fevers in this country having been
 “formerly of an inflammatory nature; *but true inflam-*
 “*matory fevers are now seldom to be met with.** *Seden-*
 “*tary occupations, and a different manner of living,†* have
 “so changed the state of diseases in Britain, that there is
 “now hardly one fever in ten where the lancet is necessary.
 “In most low, nervous, and putrid fevers, which are now
 “so common, bleeding is really hurtful, as it weakens the
 “patient, sinks the spirits, &c. We would recommend
 “this general rule,—Never to bleed at the beginning of a
 “fever, unless there be evident signs of inflammation.‡
 “Bleeding is an excellent medicine when necessary, but
 “should never be wantonly performed.” At page 78 it
 is said, “Fever is called *acute* when its progress is quick,
 “and the symptoms violent; but when these are more
 “gentle, it is generally denominated *slow*. When livid
 “or petechial spots shew a putrid state of the humours,
 “the fever is called *malignant, putrid, or petechial*.”

To Dr. Buchan’s statement that we should never bleed
 at the beginning of a fever, unless there be evident signs
 of inflammation, I have further to observe, that the most
 evident effect of blood-letting is, to lessen the quantity of
 circulating fluid, venous and arterial; and from this di-
 minution important consequences follow. In particular
 habits and constitutions, there frequently exists a super-
 abundance of fluid in the arteries and veins, from which
 all the varieties of plethora, over-action and sometimes

* This assertion is wrong. I regard almost every fever to have more
 or less of an inflammatory diathesis, and this in proportion to the greater
 or smaller affection of the nervous system.

† This assertion will be noticed in a succeeding page.

‡ Bleeding in many cases may be highly necessary although inflam-
 mation might not at the time actually appear. So far as it depends on
 the appearance of the buffy crust on the blood, we shall find this does
 not uniformly attend inflammation. Besides, even if it was uniformly
 a certain diagnostic, it ought not to enter into a nosological character,
 for its existence cannot be ascertained till after we have not only pre-
 scribed but employed the remedy.

oppressed action of the heart and vessels,* and their sequelæ ensue; and when this is the case in health, injurious must that train of symptoms be, which succeed it in disease, more especially in fever, where all the symptoms of increased irritability are so prominent. By diminishing the quantity of blood from the general mass, the opposition to its progress along the vessels is lessened, and, with it, the degree of stimulus given to the vascular system, will necessarily occasion contraction and pulsation to flow slower and softer. Nearly the whole of the larger viscera can support some degree and duration of congestion, without impairing their structure, or their functions being much disturbed, But to relieve the viscera from congestion, blood-letting is the most effectual remedy. In fever the temperature of the surface is generally morbidly augmented. Bleeding very seldom fails to diminish the severity of this symptom, and the general effects of a refrigerant are more or less produced; the skin likewise becomes relaxed and moist, which frequently happens even while the blood is flowing. It may be supposed, since the circulation is seldom quickened without a proportionate augmentation of the breathing, that blood-letting reduces the frequency of the latter along with the former, and, it is therefore often found particularly efficacious in subduing hurried respiration. The usual signs of the above affections are flushings of the face and eyes, which commonly disappear under its use. The eye, from being dim, haggard, and vacant, becomes clear and calm; and indeed its whole expression, together with that of the countenance, becomes intelligent and altogether greatly improved. Blood-letting assuages the sensation of heat, and aridity of the mouth and fauces, so frequently complained of by febrile patients, and of course lessens thirst. The tongue, from being furred, parched,

* See the different states of the pulse as noted by M. Le Docteur Vatable, page 183.

and tremulous, I have known very soon after an effective bleeding, become steady, moist, and clean. It frequently improves the digestive organs, no doubt by there producing relaxation and healthy secretion, consequently checks nausea, retching, and vomiting. Patients who have scarcely taken any thing but liquids for several days, frequently, after losing a quantity of blood take their food with considerable appetite. One great advantage which this practice superinduces, is the convenient relaxation of the bowels. It is by no means unusual for the demand for stool to become so very urgent, as to oblige the operator to tie up the patient's arm before the proper quantity of blood has been taken away, though the slightest inclination had not been felt before the operation, nor even any alvine evacuation taken place for a considerable time before. It also aids, from the same property, the operation of cathartics. On the contrary, in some particular cases of diarrhœa, more especially that form of it which frequently supervenes in protracted cases, and sometimes during convalescence, and which depends in a great degree upon an inflamed state of the mucous membrane of the intestines, bleeding proves the best means to restrain it, though frequently made use of for an intention very different. Ischuria, or stoppage of urine, is a very common symptom ; and the great relief to those affected with it, by a free use of the lancet, would form in itself a sufficient indication of its employment, which unquestionably is owing to the general relaxation ever occasioned by this powerful remedy. Spasm, subsultus tendinum, and such like, when present, receive as much relief from it as they do in other morbid combinations. The last immediate effect produced by the taking away blood, is its powerful influence on sleep. Although either in health or disease this refreshment is necessary, and may be procured by other means, yet the patient by these, awakes only to be tormented by the train of morbid symptoms,

from which he had been partially relieved by an acceptable but more or less disturbed sleep ; but in that obtained by the drawing away blood, he awakes refreshed and relieved from almost every unpleasant symptom, except those pains which the restoration of intellectual sensibility empowers him to feel.

Popular works on medicine should avoid, as much as possible, such a full detail of symptoms as would confuse the mind of common understandings, but clearly point out the characteristic symptoms, more especially the leading ones, of the early stages of disease, when a judicious treatment will prevent serious mischief. But they are generally either too profuse on the subjects of which they treat, or defective in the leading points which a reader requires to know. This is an objection especially applicable to the before mentioned and well-known work of the late Dr. Buchan, whose language is so easy and familiar, but at the same time his definitions of diseases are so loose, as to have led numerous readers into the grossest and frequently most dangerous errors on the nature of their complaints. The practice is by no means less exceptionable : indecisive, timid, and inert, if it does no good, it has the negative merit of doing little harm ; which may justly be said to be deceiving the public, as much as the most shameless empiricism ; because, by relying on its maxims, the opportunity is very frequently lost, which can never be recalled, of restoring health by a judicious and active treatment ; and thus life is made a sacrifice by that which may justly be termed worse than neglect,—*scientific supineness*, and the use of placebos. All the popular publications which had appeared before Buchan's in 1769, receipt books excepted, are more or less tainted with a tincture of the schools, retaining a considerable portion of professional triteness and phraseology. A little before this period, Tissot, a most celebrated practitioner, published his works, which were very numerous, on the

continent, and wrote them solely for popular use. The first was entitled "Advice to People in general with respect to their Health;" a work of considerable merit, and no doubt has been highly useful. He then addressed different ranks of society on the subject of those particular disorders, to which their respective situation and mode of life more immediately exposed them, with the like success. These publications were still more peculiarly useful, as it brought the subject home to every one's feelings. His "Treatise on the Diseases of People of Fashion;" also on "The Diseases incident to Literary and Sedentary Persons," &c., were thus successively brought forward. All his productions prove him to have been a physician of great ability and experience; and the perusal of them must afford much satisfaction and advantage. Previous to Tissot's works, Ramazini, another learned and experienced foreigner, had published a very important work on the "Diseases of Tradesmen," in which he clearly exhibits the advantage of descending to a minute investigation of diseases as they affect with different modifications different ranks of society. It appears that the success and utility of these publications on the continent induced Buchan to undertake a work on a similar plan, suited to the state of his country, as those of Tissot and Ramazini's had been adapted to their's. It seems to have been justly considered the *chef d'œuvre* of popular medicine in the modern school at the time at which it was written. It has been read universally and translated, but must now give place to other improved productions of the same kind. The style, however, is certainly easy and fluent, and better calculated for a popular work than most others. Its precepts likewise are inculcated with those opposite maxims and facts, which must ever leave a lasting impression, and the subject is brought home to the feelings of the reader, by the peculiar manner in which it is told. The success of this work has induced many others to

pursue the same plan, they however all want that peculiar charm of language, and simplicity of style, which is so much adapted to the popular taste. But what is very extraordinary, though the science of medicine has been greatly enriched since that time by numerous important discoveries, even the last edition of his *Domestic Medicine*, although revised by his son, who writes in the same easy and pleasing style, does not contain the smallest vestige of many of them.

It may be seen, by taking a retrospective review of popular writers on medicine, that the history may very properly be divided into three distinct parts. The first extending from the earliest attempts in that department to late in the eighteenth century, when Dr. Buchan's publication made its appearance. All the works before this period are less suited to popular use, as they retain both a tincture of theory, and some of the phraseology of the schools. The second period extends from this time to the introduction of the new French chemistry into medicine, and the transportation of German physic into our most popular works. At the head of this school stood the late Dr. Beddoes, zealous in the pursuit of knowledge, standing high in chemical discovery, and although frequently too sanguine in his anticipations, yet, our best thanks and acknowledgements will be ever due to him for his unwearied exertions. The Doctor's first and chief aim was to extend the popular acquaintance with medicine, not only by establishing public instruction for that purpose, but also by his writings. Many things at this period were more scientifically elucidated, and physicians becoming better acquainted with the nature and variety of substances both of aliment and medicine, popular productions assumed a bolder and more decisive character, so much as to make up in a great degree, for what was then considered defective in the practice in Dr. Buchan's work. The third æra extends from this chemical change

to the present day, and forms a period in which the pursuit of chemistry making a part of a liberal education, mankind have become much abler judges of medical subjects.

These improvements in medicine, however, and its extensive popular diffusion in various shapes, have of course neither been brought about by the labours of any one man, or been confined to the meridian of the mother country alone ; but by the labours of many men, who, in disregarding systems and contracted notions, have assiduously traced out particular diseases, and the efficacy of remedies, more consistently to the principles of inductive philosophy, than has been effected since the days of Hippocrates. Experience and reason have acquired a signal triumph over the dogmas of the schools, and the prescriptions of speculative authorities. An impartial and indeed active spirit of enquiry has pervaded nearly every department of the profession ; and promises finally to place medicine in the class of the more perfect sciences. Of late some colonial practitioners have, with philanthropic liberality, extended, in a popular form, its benefits to tropical regions, more especially the West Indies, which are considered so much the fruitful seat of disease, and where it is so powerfully called for in every possible way that its utility can be enforced. We may likewise add to these arguments, the constant sudden attack and rapid progress of every malady, which very frequently becomes fatal even before medical assistance can be procured to administer relief, and arrest its progress. The first of the West India works, published in 1790, is entitled "Medical Advice to the Inhabitants of Warm Climates on the Domestic Treatment of all Diseases incidental therein, with a few useful Hints to New Settlers for the Preservation of Health and the Prevention of Sickness." This is a work of much merit ; but not without its faults ; and is the production of Dr. Thomas, then practising as

surgeon at Nevis. It affords excellent information on many important subjects peculiar to the situation and climate of the West Indies, But the work of Dr. Thomas's that I shall now particularly notice, is his "Modern Practice of Physic," (fourth edition, London, 1813), one of those systematic collections on the practice of medicine, which forms a sort of bibliothèque to the practitioner as well as to the student, and has been always received with gratitude by them, without any respect to the opportunities of observation, or individual authority of their compilers. Certainly Dr. Thomas's work is a most respectable specimen of this description, and highly approved, when first brought forward, by all the periodical writers. The London Medical Review says as follows :—"A treatise nearly universal in its object, has been particularly desirable, and Dr. Thomas having had opportunities of actually observing the diseases and practice of different countries, but especially those of hot climates, and being conversant with the writings of our best modern authors and teachers, may be considered as well qualified to undertake so important a task. We think that Dr. Thomas has acquitted himself of his undertaking in a manner highly creditable to him as a man of research, and as a practical physician, and that his work deserves to stand high in the catalogue of this kind of compilation." I must, however, notwithstanding these, and other high encomiums, materially differ with Dr. Thomas, on the subject of blood-letting in fevers, and, of course, also with the Reviewers, some of whom have, no doubt, since that time, changed even their own sentiments of its utility.

Dr. Thomas, in his "Modern Practice of Physic," which has had an extensive circulation, at page 41, says, that "Typhus mitior or nervous fever generally comes on with a remarkable mildness in all its symptoms ; and although the patient experiences some trifling indisposi-

“on for several days, still he has no reason to suspect the
 “approach of any severe disease. At first, no rigors are
 “perceived, there being only a slight chilliness, which is
 “not succeeded by any increase of heat, or redness of the
 “face ; on the contrary, it is unusually pale and sunk. He
 “perceives, however, some degree of lassitude and debili-
 “ty, with anxiety, dejection of spirits, sighing, and loath-
 “ing of food ; and towards evening these affections are
 “somewhat increased.

“In the course of a few days, and as the disease advan-
 “ces, there arise a difficulty of breathing, oppression at
 “the chest, pains in the head, accompanied with a confu-
 “sion of ideas ; there is great depression of strength, even
 “to fainting, whenever the patient attempts to sit up ; the
 “tongue becomes dry, and is covered with a dark brown
 “fur ; the teeth are thickly incrustated with the same ; the
 “pulse is small, low, and frequent, and now and then in-
 “termits ; cold clammy sweats break out on the forehead
 “and back of the hands, while the palms glow with heat ;
 “the urine is pale and watery, like whey ; the whole ner-
 “vous system is much affected with tremors and twitch-
 “ings ; involuntary motions of the muscles and tendons
 “arise ; the patient picks at the bed-clothes almost in-
 “cessantly, and either mutters to himself or talks inco-
 “herently. There is seldom, however, any high degree
 “of delirium, nor is this fever ever attended with violent
 “ravings, or with any fulness of the vessels of the head ;
 “but there is usually a dilatation in the pupils of the eyes.

“In the progress of the disease, the system is une-
 “qually affected ; for sometimes head-ach, restlessness,
 “and uneasiness, prevail in a high degree, while at the
 “same time the tongue is clean and moist : and at other
 “times, while there is no head-ach or restlessness, the
 “tongue will be dry and foul, and profuse sweats will
 “break out. This fever, moreover, is not only thus ir-
 “regular in affecting various parts of the body differently,

“but it is also irregular in its exacerbations ; and these, “instead of taking place in the evening, will arise often “in the morning. Again, sometimes the fever is very “violent for the first three or four days ; it then diminishes “for a time, and then perhaps increases again. Evacua- “tions, such as sweating and purging, are very apt to “ensue in the course of the disease, which never fails to “exhaust the patient.

“In typhus fever, a great discharge of saliva sometimes “occurs, but as it now and then continues for a consider- “able time without affording any relief to the patient, it “may be concluded to arise from some accidental cir- “cumstance, perhaps not unlike the ptyalism that some- “times takes place in the hysteria. In many instances, “the spitting is so viscid and ropy as to inconvenience the “patient very much, and by clogging up the fauces, great- “ly to impede both deglutition and respiration. In such “cases, moreover, the tongue and whole of the mouth are “frequently beset with aphthous ulcerations.

“Typhus mitior frequently runs on for some weeks, “and produces such a state of debility as to destroy the “person from that cause alone, or it degenerates into a “typhus gravior or putrid fever ; but when it terminates “favourably, it usually goes off about the fourteenth or “twentieth day, perhaps, either by diarrhoea, or by a gen- “tle moisture diffused equally over the whole body ; but “often it exceeds a month in duration, and terminates at “last without any evident crisis.

“Profuse evacuations by sweating or purging, much “watchfulness, sinking of the pulse, great incoherency of “ideas, mutterings, picking of the bed-clothes, consider- “able dilatation of the pupils of the eyes, involuntary dis- “charges by urine and stool, starting of the tendons, and “hiccups, point out the near approach of death ; whereas, “on the contrary, the pulse becoming fuller and more “slow, the tongue moist, respiration free, a gentle mois-

“ture coming on about the fourteenth day, deafness ensuing, tumours appearing behind the ears, or miliary eruptions, unattended by profuse sweats, being perceived on the body, promise a favourable termination.

“The usual appearances on dissection are, a softness and flaccidity in the solids; a dissolved state of the fluids, particularly of the blood; collections of sanious matter in the different cavities; turgescence and inflammation of the thoracic and abdominal viscera; and in the interior parts of the brain collections of serous fluids.

“From the very gradual manner in which this fever comes on, the great mildness of the symptoms at its commencement, and the time that usually elapses previous to absolute confinement, it is seldom that practitioners have it in their power to cut short its progress by a timely exhibition of proper remedies.”

As to the foregoing terrific description of symptoms, I need make no comment; but when Dr. Thomas tells us, at page 43, that “*bleeding is a remedy not to be resorted to in this fever,*” I must enter my protest, as by neglecting it, the horrid termination which he so forcibly and truly depicts, has been, and still is, unfortunately too often the result. The inflammation of the viscera, and the chemical changes which take place in the fluids and solids, as appear by dissections after death, may be prevented by a treatment contrary to that which he and others have unhappily recommended and pursued. He adds, “In temperate and cold latitudes, and in the winter season of the year, it is by no means an uncommon occurrence to meet with typhus complicated with more or less topical inflammation of the thoracic viscera. *In such cases, I have known venesection to have been employed; but even in these, it has appeared to me to be detrimental, and in two instances which lately fell under my observation, SEEMED INDEED to have DESTROYED the PATIENTS.*”

This indeed is quite characteristic. "Instead, therefore, "of having recourse to the lancet, where topical inflammation of the viscera of the thorax attends on typhus, "I would recommend drawing blood from the chest, either "by means of a few leeches, or by the application of a "scarificator and cupping-glass." Dr. Thomas should have mentioned the stage, and other circumstances of the disease, at which venesection was resorted to. Some years ago, this very paragraph, and the observations of other authors, the supporters of the doctrines of debility, occasionally puzzled me considerably, although I had on other similar occasions repeatedly set them aside. To endanger the destruction of the patient by venesection, or to commit a dangerous error, and even risk the life of the patient by neglecting to bleed, was no pleasant dilemma. It then occurred to me, corroborated by other circumstances, that in consequence of medical men being much divided in their sentiments on the subject, a collection of the whole would greatly benefit both the profession and the public. From matured experience, I can now presume to offer more fully my own opinion.

Typhus fever has been by some divided into typhus mitior and typhus gravior, which latter is regarded the most putrid and malignant. Of the former we have seen what Dr. Thomas says. Of typhus gravior, (page 51), he observes, that, "on its first coming on the person is "seized with languor; dejection of spirits; amazing depression and loss of muscular strength; universal weariness and soreness, pains in the head, back, and extremities, and rigors; *the eyes appear full, heavy, yellowish, and often a little inflamed; the temporal arteries "throb violently; the tongue is dry and parched; respiration is commonly laborious, and interrupted with deep "sighing; the breath is hot and offensive; the urine is "crude and pale; the body is costive, and the pulse is "usually quick, small, and hard, and now and then flut-*

tering and unequal. Sometimes a great heat, load, and pain, are felt at the pit of the stomach, and a vomiting of bilious matter ensues."

Still no bleeding—no purging—mark, then, the result from Dr. Thomas's own words. "As the disease advances, the pulse increases in frequency (beating often from 100 to 130 in a minute): there is vast debility; great heat and dryness in the skin; oppression at the breast, with anxiety, sighing, and moaning; the thirst is greatly increased; the tongue, mouth, lips, and teeth, are covered over with a brown or black tenacious fur; the speech is inarticulate, and scarcely intelligible; the patient mutters much, and delirium arises. The fever continuing to increase still more in violence, symptoms of putrefaction shew themselves; the breath becomes highly offensive; the urine deposits a black and fetid sediment; the stools are dark, disagreeable, and pass off insensibly; hemorrhages issue from the gums, nostrils, mouth, and other parts of the body; livid spots or petechiæ appear on its surface; the pulse intermits and sinks; the extremities grow cold; hiccups ensue; and death at last closes the tragic scene.

"When this fever does not terminate fatally, it generally begins, in cold climates, to diminish about the commencement of the third week, and goes off gradually towards the end of the fourth, without any very evident crisis; but in warm climates it seldom continues above a week or ten days, if so long. Our opinion as to the event, is to be formed by the degree of violence in the symptoms, particularly after the appearance of petechiæ, although, in some instances, recoveries have been effected under the most unpromising appearances. An abatement of febrile heat and thirst; the tongue becoming moist and clean; a gentle moisture diffused equally over the whole surface of the body; loose stools; turbid urine; the pulse being stronger but less frequent,

“a free secretion of saliva; tumour and suppuration of
 “the parotid and axillary, or inguinal glands; a scabby
 “eruption about the mouth, and the delirium and stupor,
 “abating or going off, may be regarded in a favourable
 “light. On the contrary, great muscular debility, very
 “laborious respiration, difficulty of deglutition, stupidity
 “and listlessness of the eyes, perpetual writhing of the
 “body, petechiæ of a livid colour, with dark, offensive,
 “and involuntary discharges by urine and stool, fetid and
 “cadaverous sweats, hemorrhages, subsultus tendinum,
 “and hiccups, denote the almost certain dissolution of
 “the patient.

“The appearances usually perceived on dissection are,
 “inflammations of the brain and viscera, but more par-
 “ticularly of the stomach and intestines, which are now
 “and then found in a gangrenous state. In the muscu-
 “lar fibres there seems likewise a strong tendency to
 “gangrene.”

“On the very first taking place of any of the symptoms
 “of this fever, we should immediately attend to them,
 “and endeavour to prevent any bad consequences from
 “ensuing, as they will never go off of themselves, but will
 “continue to increase, until a disease of a most dangerous
 “nature takes place. This being the case, we should re-
 “sort to proper remedies at the first onset, and not wait
 “till the body is enervated.”

If practitioners are still so infatuated as to disregard
 the stage of excitement, or the indications of congestions,
 and wait for the accession of the putrid symptoms, to
 satisfy themselves of the malignant nature of the disease,
 they will unquestionably nearly lose every patient who
 labours under this form of typhus fever. The putrid
 symptoms only occur in the last stage or that of collapse,
 and are the products of the preceding stage of excitement.
 An attentive view of the disorder at the bed-side, from
 its beginning to its termination, must convince every

candid mind of the truth of these assertions. But should any one still doubt, or not be fully satisfied by a contemplation of the symptoms during life, I would recommend to carefully examine the inflammatory, or the congestive appearances of the viscera of the head, the chest, or the belly, in mortal cases, and I am convinced that all his prejudices and doubts will be completely removed.

Dr. Thomas recommends an emetic as the most proper remedy at first. After its operation is over, the bowels may be opened with some gentle laxatives. These steps, he says, being pursued, and the nature of the disease being clearly understood, he would advise the ablution of the patient with cold water, or rather a general affusion, provided the heat of the body is steadily above the temperature of health.

But on the subject of bleeding he is again at variance with experience and the dictates of nature. “It is no *uncommon* occurrence,” says he, “for the symptoms to run very high at the commencement of this fever so as to give it rather an inflammatory appearance, which has induced practitioners at times, to draw off blood, by opening a vein; *but sad experience has fully evinced the impropriety of so doing. Contagion certainly weakens the force of the solids; for which reason, whenever we suspect a fever to have arisen from this cause, we should proceed with the greatest caution in drawing blood, even although the symptoms may run pretty high at the beginning, and may seem actually to demand the taking away a considerable quantity.*

“Instead, therefore, of bleeding, or using any other evacuation than keeping the body open with mild laxative medicines, in such cases as are purely typhus and proceed from contagion or depressing passions, we should support the patient by allowing a liberal use of wine, &c.”

Dr. Thomas has been at infinite pains in describing the

characteristics of typhus, and I give him full credit for his good intentions ; but I cannot help deviating from him in principles and practice ; and certainly, if the bug-bears, *contagion*, *malignancy*, and *putridity*, were totally exploded, medical men would contemplate the nature of mild inflammatory fever, to which the unmeaning term typhus has been applied, with more steadiness ; the efficacious effects that would result from which are so obvious, that the consideration of them excites the most poignant feelings of regret, that human nature should still in this instance suffer so much from the delusions of a name, even with men of abilities. It has for many years affected the life of all those who happen to experience illness of any kind attended with fever ; it is immediately attributed to contagion, “the contagious fever, is typhus, typhus soon “runs into putrid fever,” to prevent which, wine, brandy, bark, panada, and orange juice, are unremittingly exhibited.—Such are the modes of reasoning, and cockering practice not only of Dr. Thomas, but of numerous practitioners, and to this treatment innumerable are the victims which have fallen to fill the abodes of death’s cold mansion.

Dr. Wilson Philip, another supporter of the doctrines of debility, having read a course of lectures on febrile diseases in the summer of 1796, has been a pretty long observer of morbid phenomena, and very properly remarks, that “there is no remedy whose *modus operandi* “demands more attention than blood-letting ;” yet in the year 1805, he, in a most indiscriminate and unaccountable manner, (unless from preconceived hypothesis), says, “*none* of his fever patients could bear bleeding ;” and in his fourth edition of his Treatise on Fevers, published in February, 1820, at page 122, he again says, “there can be little doubt that a spontaneous hemorrhagy “sometimes proves a favourable crisis in typhus, but it is “very *doubtful* whether the hemorrhagy is the cause or

“ consequence of the favourable change ; I am inclined to
 “ the *latter* opinion, *because I have not*, either in the
 “ course of practice or reading, *met with any unequivocal*
 “ *case in which artificial loss of blood was of decided ad-*
 “ *vantage in this fever.* If the state of the body in some
 “ rare cases of typhus be such, *[that the advantages deri-*
 “ *ved from venesection will more than compensate for the*
 “ *harm done by its debilitating effects,* NOBODY HAS YET
 “ SUCCEEDED IN POINTING OUT THE MEANS OF DISTINGUISH-
 “ ING SUCH CASES.” The Doctor, in another part of his
 book, says that patients affected with typhus frequently
 die of apoplexy. Notwithstanding the plausible manner,
 however, in which he speaks of these points, I do most
 confidently assert that *no* patient, if properly treated, will
 ever by apoplexy fall a victim in typhus fever. If the
 determination of blood to the head be often so great as to
 produce apoplexy, it is impossible that we could have a
 more powerful indication for the use of the lancet. I
 shall here observe, that it is not to the Doctor’s defi-
 nition of diseases, but his treatment of them that I object ;
 and under those very symptoms which he lays down as
 denoting approaching or threatening apoplexy, I have
 often taken blood copiously from both arms at one time,
 and with the happiest and most complete success. But
 to lessen the violence of the symptoms, an object certain-
 ly desirable in all diseases of re-action, is by no means
 the highest recommendation of blood-letting ; if ably
 conducted and its *indications* and *contra-indications* pro-
 perly discriminated, it will always greatly *increase the*
chance of recovery, and of course greatly *lessen the mor-*
tality of fever. This must therefore be considered the
 main object for which it is to be valued more than all
 other remedies with which we are yet acquainted ; and I
 trust the reader has already seen, from the very contra-
 dictory accounts given of it, ample reasons for my bring-
 ing it forward as the paramount and chief subject of the

present dissertation. Indeed, that blood-letting diminishes the mortality of fever is, I am assured, established beyond the possibility of a doubt, by all judicious practitioners.

Dr. O'Brien, of Dublin, has recently published a report of the diseases of that town, and he begins with typhus, on account of its being the most prevalent. It is affirmed that in this city typhus is of a more debilitating character than in other great towns, yet we see Drs. Mills, Stoker, O'Brien, &c., supporting the practice of blood-letting in this disease. With respect to this remedy, so much recommended by many respectable physicians in London, Dr. O'Brien observes, although an inflammation, or rather sub-inflammation, of different organs, frequently appears *in the progress* of this disease, yet in his opinion they are *never* to be considered the primary affection, but as secondary symptoms, the consequence of an unequal distribution of blood, produced by the primary disease. The Doctor and myself do not entirely agree on this point. With respect to the brain, the organ most seriously and frequently affected, he is of opinion, that its condition approaches more to apoplexy, from fulness of blood-vessels, than to inflammation. The accumulation of blood being the consequence, according to the Doctor, of debility of the blood-vessels, the state of the brain, he terms sub-inflammation. Blood-letting, therefore, he says, unless where distinct symptoms of acute inflammation exists, ought to be employed only to palliate the symptoms arising from the unequal distribution of blood; but *never* as a specific cure of the disease, unless so far as the relief of predominating symptoms may contribute to the general effect. If a practitioner sets about curing the delirium attendant on typhus, as he would on that attendant on inflammation of the brain, the Doctor asserts, he will find that death will be the consequence of the large evacuations of blood, which are indispensable in the latter disease. Dr.

Clutterbuck, in attempting to identify fever with inflammation, collected a volume of evidence, which must ever powerfully operate on the minds of rational physicians, and remain a perpetual monument of the genius, industry, and perseverance of its author. To this work, the first modern endeavour, on a large scale, to employ the lancet in typhus fever, is confessedly due; and many candidly acknowledge, with the greatest obligations, that it is to it they owe the favourable revolution in their opinions and practice. If he failed in instituting his second proposition, that the principal seat of the disease is in the brain, he nevertheless has demonstrated, beyond all possibility of confutation, that this organ is almost always, in the course of the disease, and frequently early in it, affected with topical congestion, or an accumulation of blood in the vessels proper to itself. The disposition of every fever to inflammation, he has clearly and distinctly established. At page 72 I have mentioned when I conceive the contents of the cranium to be in a state of acute or sub-acute inflammation, and I perfectly agree with Dr. O'Brien, that if the diagnosis of these and the simple or passive congestion of the brain are not properly distinguished there will be much reason to fear, that an indiscriminate use of this remedy, particularly an extravagance of it in the latter case, may ultimately bring it into disrepute—a fate it has more than once experienced, as is evident from the history of medicine.

From this digression, I shall return to Dr. W. Philip, because his book on febrile diseases, like that of Dr. Thomas's, has been for many years in the hands of numerous students as well as practitioners, many of whom rely principally upon such works for their diurnal resource of practical reference and information; and, moreover, although individual criticisms might seem invidious, yet it is proper that every controversy should have an opportunity of viewing itself in various directions, for it is only

by these different modes of comparison that facts can be ascertained and established ; and as the Doctor for nearly twenty years guided and directed the practice of almost every medical man in Worcester, it becomes curious and interesting to examine analytically into the real state of his doctrine and treatment of fevers. I may, however, first observe, that Dr. J. Von Rotterdam, Clinical Professor of Therapeutics and Materia Medica in the School of Medicine at Ghent, Physician to the Great Hospital of the same city, Member of several Learned Societies, &c., in his *Treatise on Blood-letting*, which obtained the prize on this question, as proposed by the Medico-Academical Society of Paris, expresses himself in tenor somewhat similar to the two last mentioned gentlemen. Much, then, it would seem still remains to be done. But fortunately the occasion not only of their failure, but that of many others, I shall be enabled to prove, even from their own writings, as clear as a ray of light. And of this I am, moreover, ready to give ocular demonstration, at the bed-side of the patient, *when permitted to treat typhus in its first and other stages*. It is, however, my wish, not to depreciate the general merits of authors, but to display and correct their local errors, particularly such as the former quotations contain, and which I have distinguished by italics ; for it is, in fact, our province to prevent fevers becoming *malignant* or *putrid*, which may generally be accomplished by judicious treatment at the commencement.

*Of the Symptoms of Synocha, or Inflammatory Fever,
by Dr. Wilson Philip.*

This fever is so called from its being accompanied with symptoms denoting general inflammation in the system.

“The symptoms of synocha,” says the Doctor, “are as simple as those of typhus are complicated. The pros-

“tration of strength, which precedes the attack of fevers,
 “is generally less considerable; and the cold stage is more
 “frequently absent in synocha, than in typhus.

“The pulse, even in the cold stage, is seldom small or
 “very frequent; after the heat commences, it becomes
 “more or less hard, full, rapid, equal, or, as it has been
 “termed, vibrating; still, however, its frequency is less
 “than it often is in those fevers in which debility prevails.

“The respiration is frequent, hurried, generally op-
 “pressed, and often attended with a dry cough.

“The heat is greater than in other continued fevers,
 “and of that kind which has been termed burning, in
 “contradistinction to acrid. The face is full and florid;
 “the eyes inflamed and incapable of bearing the light.

“The secreting powers are more completely suspended
 “than in most cases of typhus. The skin, mouth, and
 “throat are dry, and the mucus covering the tongue be-
 “comes foul and viscid. The urine is scanty and high-
 “coloured, and the bowels costive.

“The head-ach is generally considerable, with watch-
 “fulness, throbbing of the temples, or tinnitus aurium.
 “The deprivation of the senses, however, is less frequent
 “in synocha than in typhus, nor is delirium a common
 “symptom of this fever; but when it does occur, it rises
 “to a degree which from the debilitated state of the sys-
 “tem we hardly ever meet with in typhus. The patient
 “becomes frantic, and seems to acquire preternatural
 “strength.

“When the delirium is obstinate, or coma attends, we
 “have reason to suspect an inflammatory affection of the
 “brain.

“It is said that when synocha proves fatal in a few
 “days (which if it ever happen is a rare occurrence) the
 “pulse does not become weak or intermitting before
 “death; the patient seems to be carried off by the vio-
 “lence of the excitement.

“When the disease continues for a longer time, however, and the remissions are considerable, the pulse during these, (although the fever has not yet assumed the form of typhus) becomes weak and languid, the patient appearing to be exhausted by the foregoing paroxysm ; which is soon renewed, however, with its former violence.

“Hemorrhagies, which frequently occur in this fever, are generally from the nose, ears, lungs, rectum (if the patient happen to labour under the hemorrhoids) or from the uterus ; and are almost always favourable ; the blood discharged has the healthy appearance, except that the coagulum is frequently covered with the buffy coat. Hemorrhagies from the higher parts of the intestines, kidneys, urethra, skin, eyes, &c., are rarely, the two last perhaps never, observed in synocha.

“Such are the symptoms of well marked synocha. They vary in different cases from those just enumerated, to the mild febrile symptoms attending a common catarrh.

“After they have continued for some time, they always, at least in this country, begin to be changed to those of typhus. The proportional duration, as well as violence, of the synocha and typhus, is different in different cases ; and proves an endless source of variety. The manner in which the symptoms of synocha are changed into those of debility also varies much. The duration of continued as well as intermitting fever is shorter, their symptoms more violent, and their changes more rapid, in the warm, than in the cold, and temperate climate.

“The symptoms which follow the state of increased excitement are the more dangerous, as well as the most varied part of the fever.”—(page 127).

Treatment. “The reader,” says the doctor, “will perceive that, from this view of the subject, the vari-

“ous indications in fever resolve themselves into two.

“I. To remove the causes which tend to increase the debility of the capillaries, which is done:

“I. By removing the causes of the fever.

“II. By removing, as far as we can, all causes which excite the animal functions;

“III. By lessening the sensibility to those which remain.

“II. To restore the due action of the capillaries, which is done :

“I. By the use of stimuli, which act immediately on the capillaries.

“II. By so regulating the action of the heart and larger vessels as may tend most effectually to restore vigour to the capillaries.”—(page 182.)

As to the twenty pages which the doctor occupies in a desultory manner about “using stimuli, which act immediately on the capillaries ; and that the action of the capillaries is best restored by a moderate and long continued excitement of the heart and larger vessels,” &c. I may for obvious reasons pass entirely over.

“In the early stages of most fevers, however, it is proper, to have recourse to such means as more directly reduce the increased action of the heart and larger vessels.

“It appears that diminishing the quantity of blood is the most powerful means of diminishing the action of the heart and blood-vessels. But as the quantity of blood cannot be much diminished without *debilitating* every function of the system, it is of consequence, where the symptoms run high, to lessen as much as we can its stimulating power, that the excitement may be diminished with as little evacuation as possible.

“The means of diminishing the stimulating power of the blood are,

“I. Dilution, and

“ 2. The medicines which have been termed refrigerant.—(p. 202.)

“ When the foregoing means fail sufficiently to diminish the excitement, we must have recourse to blood-letting.

“ As the increased excitement of the heart and blood-vessels supports that of every other part of the system, it is not surprising that blood-letting has been found the most effectual remedy in synocha.

“ Our view in the commencement of fever, however, is not to reduce the action of the heart and larger vessels to the natural standard. This would be to obviate the means afforded by the nature of the circulation for removing the cause of the disease. It is only our object to lessen excitement when it goes beyond the degree most favourable to this end.

“ If the means employed be so injudicious, as to reduce the excitement of the heart and larger vessels more than is necessary to insure its requisite continuance, the patient will sustain a double injury. The stimulus necessary to the excitement of the capillaries will be too much lessened, and the debility of the heart and larger vessels hurried on, so that the fever will soon begin to assume its worst form. As blood-letting is the most powerful means of diminishing excitement, it is consequently the most apt to induce debility; and caution is particularly necessary in the synocha, which if not cut short at an early period, is constantly succeeded by a disease of debility. It is important therefore carefully to consider the various circumstances which demand attention in the employment of this remedy in fever.

“ It is not always sufficient in the treatment of this disease, to study the symptoms of the case for which we prescribe. If the fever be epidemic, we must acquire a knowledge of its general course, that we

“ may know what symptoms to expect ; for our plans
 “ in the treatment of fever are often influenced as much
 “ by what the state of our patient will be, as by what it
 “ is.” From the manner which the Doctor now expresses himself, I am sure his mind is repletely absorbed with erroneous theory, and that by practitioners thus waiting for the symptoms which he expects, or not taking the proper means to ward them off, has destroyed the lives of thousands and tens of thousands,—capillary debility—typhus—or that typhus soon runs into putrid fever, are the bug-bears haunting the Doctor’s imagination. “ If much debility is expected, we must be
 “ cautious in recommending evacuations. An attention
 “ to the prevailing epidemic, therefore, may be mentioned, as the first circumstance to be attended to in considering the propriety of blood-letting in fevers.

“ We must attend to the nature of the cause, which
 “ produced the fever. It appears from what was said of
 “ the causes of fever, that an atmosphere loaded with
 “ putrid effluvia is one of the most common, and that
 “ a fever thus produced is afterwards communicated
 “ by its peculiar *contagion*. All fevers, it was observed,
 “ arising from putrid effluvia or contagion, whatever be
 “ the state of the patient at the time he is attacked, or
 “ the nature of the symptoms at an early period, will soon
 “ assume the form of typhus. In such cases, therefore,
 “ blood-letting must be employed with caution, even
 “ although the excitement at the commencement be considerable.” This is a mere echo of Dr. Thomas, and requires no further reply than that which I have already given.

“ When, on the contrary, the fever has arisen from
 “ cold, from strong passions, violent exercise, &c., although we know, that if it be protracted for many
 “ days, the symptoms of synocha will be succeeded by
 “ those of typhus; yet we have reason to believe, that the

“synocha will form the principal part of the disease, and
 “that if the excitement be prevented from running high
 “at the commencement,” (which circumstance ought
 to be strictly observed in all fevers,) “the debility to-
 “wards the termination will probably be inconsiderable.”
 This being a good practical observation of the Doctor’s,
 and as I have no wish to depreciate it, shall therefore
 omit many of his remarks which immediately follow,
 and mention those only which are more applicable to
 the present subject.

“It thus appears that no general rule can be laid
 “down respecting the degree of excitement in fevers
 “which demands blood-letting; the determination of
 “this question, unless the excitement be extreme, de-
 “pending almost as much on the preceding circum-
 “stances as on the symptoms of the disease.

“If the face be flushed, the pulse full and strong, and
 “the heat considerable, it is usually to a greater or less
 “extent employed with advantage, unless the nature of
 “the fever or the situation of the patient particularly
 “contra-indicates it.

“Let these however be what they may, we must keep
 “in view, that great excitement is itself a highly debili-
 “tating cause, and often debilitates more than a well-
 “timed blood-letting which relieves it.” With this I
 cordially agree, and much regret that the words typhus,
 debility, malignancy, and putrescency, should have on so
 many other occasions led the Doctor’s mind from this
 great and important point of practice.

“Blood-letting should always be more sparingly em-
 “ployed in proportion to the degree of excitement in
 “idiopathic fever than in the phlegmasiæ, not only be-
 “cause general excitement is never so immediately
 “dangerous as the inflammation of a vital organ, and all
 “fevers, from whatever cause they arise, may from pow-
 “erfully debilitating causes assume the more alarming

“ forms of typhus ; but because general excitement is
 “ relieved by a smaller loss of blood than inflammation.
 “ Even when visceral inflammation supervenes on idio-
 “ pathic fever, we must let blood more cautiously than
 “ where the former disease exists alone ; and in the
 “ determinations of blood to particular parts so apt to
 “ occur in fevers, which more frequently consist in dis-
 “ tension of the larger vessels of the parts than actual
 “ inflammation, that is distension of the capillaries ;
 “ unless the general excitement is very considerable, it is
 “ better to attempt their removal by local than general
 “ blood-letting. If there be any exception to this rule it
 “ respects congestion in the head, because from the na-
 “ ture of the circulation congestion there is more inti-
 “ mately connected with a state of general excitement,
 “ than in other parts of the body.”

Such is the Doctor's mode of reasoning on what has long been by nosologists termed synocha or inflammatory fever, a disease in which all medical men have agreed in the necessity of more or less blood being taken away. But when he asserts, “ that no remedy demands greater
 “ attention than the *modus operandi* of blood-letting—
 “ that no general rule can be laid down respecting the
 “ degree of excitement in fevers which demands blood-
 “ letting,”—and that “ much depends on the practitioner
 “ carefully weighing all the circumstances which ought to
 “ influence his judgment,” can any person for a moment suppose that one of the bye-laws of the Worcester Medical and Surgical Society would prohibit physicians being members of it, merely because they at times use the lancet and bleed their patients ? Such is the case, however, with the above society, of which the Doctor had, for many years, been at the head, and not more than three years ago, he sent a message informing me, and afterwards confirmed it in person, that unless I strictly complied with this and some other rules, which appear

to me equally frivolous and absurd, I should certainly be prevented from becoming one of this body, and which I find, since he left this city, to be actually the fact. Whether such rules are calculated most for the benefit of a few individuals, or purely for a regard to the promotion of medical science and the good of the public, I will leave my readers to determine. Be that, however, as it may, the most interesting part of Dr. W. Philip's theory and treatment of fevers remains to be noticed. We have already seen, at page 211, that he is of opinion if blood-letting can be resorted to in some *rare* cases of what is commonly called typhus, "*nobody has yet succeeded in pointing out the means of distinguishing such cases.*" Therefore, and according to a promise I have before made, shall now proceed to point out, from the Doctor's own words, some cases of typhus, or what I have denominated simple inflammatory fever, in which the use of the lancet, if judiciously employed, with other concomitant remedies, will prevent the occurrence of all those horrid terminations, and tragical scenes which the Doctor so forcibly describes.

Of the Symptoms of Typhus, by Dr. Wilson Philip.

" An uneasy and peculiar sensation in the stomach,
 " sometimes attended with nausea and giddiness, fre-
 " quently denotes the approach of those fevers, in which
 " the symptoms of debility prevail. In many cases,
 " however, this sensation is scarcely, or not at all, per-
 " ceived, and the fever comes on with lassitude, anxiety
 " about the præcordia, alternate heats and chills, or a
 " sense of creeping in different parts of the body, which
 " has been termed horripilatio.

" The patient complains of uneasiness of the head, and
 " fixes his attention with more difficulty than usual; is
 " dejected, and wishes to be alone. His appetite is im-

“paired, he becomes restless, or if he remains long in
 “the same posture, it is rather a sensation of languor
 “than of ease, which prevents him from changing it.

“Either sleep forsakes him, or he is more inclined to
 “sleep than usual, and then his sleep is such as does not
 “refresh, disturbed by groans and starts.

“At this period the pulse for the most part is frequent,
 “small, and easily compressed; in other cases it is nearly
 “natural, and the patient often labours for some days
 “under more or fewer of these symptoms, not well
 “enough to engage in business, nor sufficiently indispo-
 “sed to be confined to bed.”

These symptoms, or some pretty similar, and tending to the same effect, are what I have distinguished as the first stage of typhus,—(see page 67),—and have recommended that cathartics and the tepid or warm bath should be employed.

“The first symptoms of typhus” says Dr. P. “are
 “often more severe. It makes its attacks with a trou-
 “blesome head-ach; acute pains in the back, loins, and
 “extremities, which often resemble a general rheumatic
 “affection; a distressing sense of weariness, much thirst,
 “and nausea, sometimes attended with a burning pain
 “of the stomach, more frequently by vomiting, vertigo,
 “dimness of sight, or numbness of the extremities.

“In some instances, the rigors from the first are
 “strong, the pulse soft, small, frequent, and sometimes
 “irregular. The general uneasiness, confusion of head,
 “and dejection of spirits excessive. There is often
 “great debility from the very commencement. The
 “tongue trembles, impeding the speech, the limbs shake,
 “and the patient with difficulty supports himself. There
 “are even instances of people, on the first attack of ty-
 “phus, falling suddenly to the ground, as if shot. (This
 “sometimes happened, for example, in the fever of
 “Grenada, described by Dr. Chisholm.) There are few

“ diseases in which the symptoms are more varied, either
 “ in the commencement or progress.”

In all such cases the excitement may not yet be sufficiently evolved for bleeding, I would therefore advise the same methods to be pursued as I have before mentioned in the first stage of typhus ; but when re-action comes on, the treatment should be conducted on the plan laid down under the second stage of typhus,—(page 106)—and varied according to circumstances, as there described.

The Doctor then goes on to state the condition of the animal functions in the progress of typhus.

“ The head-ach is often a source of great uneasiness.
 “ It most frequently has its chief seat in the forehead,
 “ sometimes in the occiput, and in some cases in the
 “ under parts of the orbits, sometimes the orbit of one
 “ eye. It is generally attended with strong throbbing of
 “ the temples ; the carotids and temporal arteries often
 “ beating strongly, while the pulse at the wrist is small
 “ and weak. *When this state of the circulation is ob-*
 “ *stinate, and accompanied with an acute or deep seated*
 “ *pain in the head, or with a considerable degree of coma*
 “ *or delirium, it generally denotes an inflammatory af-*
 “ *fection of the brain or its membranes.* In these cases,
 “ abscesses are now and then found in the encephalon
 “ after death. Cases of this kind are related by Sir John
 “ Pringle and others. Dr. Fordyce has justly observed,
 “ however, that abscesses of the brain very rarely occur
 “ in the fevers of this country. The same throbbing,
 “ also frequently indicating an inflammatory affection, is
 “ sometimes observed in other parts of the body, parti-
 “ cularly in fevers of warm climates. ‘ In the yellow
 “ ‘ fever,’ Dr. Linning observes, ‘ there is a remark-
 “ ‘ able throbbing in the temporal arteries and hypochon-
 “ *‘ dria ; in the latter sometimes so great, as to cause a*
 “ *‘ constant tremulous motion of the abdomen.’”*

Read the above paragraph under whatever designation

or name, at the same time divest the mind of preconceived prejudice for any favourite theory or doctrine, and I am assured the symptoms will powerfully call for the use of the lancet, together with other evacuants ; and were the modes of treatment which I have already pointed out for the second stage of typhus judiciously adopted, the life of almost every patient might be saved, instead of continually witnessing the appalling terminations which I shall have hereafter occasion to relate in Dr. W. Philip's own words. I do not, however, know how I can better illustrate this subject than by calling the attention of my readers to the following recent case, being attended with those very symptoms which the Doctor enumerates as mark severe typhus. A poor woman, previously strong and healthy, had, for several weeks, complained of pain in the bowels, languor and lassitude, accompanied with occasional head-ach and drowsiness, these symptoms she continued to struggle under until Sunday, 15th April, 1821, when she was confined to her bed. On the following Tuesday a medical man, of long and considerable practice in this town, was sent for, and after attending the patient till Friday the 20th, giving her friends every day the most flattering expectations of her recovery, I was, however, notwithstanding, called in, and found the poor creature labouring under abdominal inflammation, and in the last stage of oppressed brain from determination of blood ; without even the smallest possible prospect of amendment ; she expired on Sunday 22d, in a state of typhoid apoplexy. Now, I am fully aware, had she been bled, and that judiciously, in the early and proper stage of the disease, together with the employment of other evacuants, the poor woman might have survived. Dr. Hastings, in his book on bronchitis, informs us that Dr. W. Phillip, and of course himself, imagine that the carotid and temporal arteries, before mentioned, beat faster than the heart, and that they also suppose from the

smallness and weakness of the pulse at the wrist, that it beats slower than either the heart or the carotids. All this, as I before stated under the head of fever and inflammation, is palpably erroneous. The pulsation or throbbing of the arteries, wherever situated, and whether weak or strong, is always synchronus with the heart. 'The learned Celsus justly terms the pulse "res fallacissima;" and the late Dr. Heberden, in the London Medical Transactions, as also Dr. Parry, of Bath, in his Elements of Pathology, has published some ingenious observations, in order to shew how very little it is to be depended on *alone*. Notwithstanding, however, by experience, and attentive observation in combining the state of the pulse with the derangements of the other essential functions, much useful knowledge may be obtained from it.

No book I believe, ever published, has been entirely free from faults; but it appears as if Dr. Hastings had copied and imbibed, with the most sedulous industry, the errors of Dr. W. Philip, which are not a few. These would certainly be "*totally unworthy of notice except,*" as J. R. says,* "*for the false impression which they are calculated to make on the uninformed,*" and therefore I trust my objections to many of their theories and practice, will not be considered "*inconsistent with the views of just criticism;*"—they "*arise purely from a regard to science.*" Dr. H., on the authority of Dr. W. P. carries his notions so far as to assert, that the heart's motion is independent of nervous influence, and the learned Doctor modestly asks if any one will have the boldness to assert to the contrary!! Now, the fact is, we judge by the pulse, of the state of the circulation with respect to plenitude, and state of the nervous system; because the heart and arteries receiving their power of action from

* A letter, of February 24th, 1821, to the Editor of the Worcester Journal, signed J. R. in vindication of Dr. Hastings's book.

the brain, the usual mode in which the pulsation is performed will point out whether the cerebral and nervous system be in a morbid state of irritation. In order to draw any exact conclusion from the state of the pulse during disease, we ought to have some perception of it when in health, as the pulse materially differs in different subjects. A full or oppressed pulse shews the sanguiferous system to be overloaded, and by no means a real diminution of the vital powers: as it occurs in the first stage of disease depending upon inflammatory action, we generally find it at once full, hard, or a little quick; there is some drowsiness, the urine is scanty and high coloured, the bowels are usually costive, and the respiration rather slow: a small frequent pulse, with cool skin, shews weakness or defect of nervous energy: a hard, but small and very quick pulse, especially if accompanied with delirium, shews great irritation of the cerebral and nervous system. When an organ is secondarily affected, in whatever species of fever, it is necessary rather to pay attention to the functions of the organ than to the stroke of the pulse; which in this sort of case presents such irregularities, that the prudent physician should never decide from it. It frequently happens, that a pulse apparently shewing great weakness, is attendant on inflammation of the brain, lungs, stomach, and intestines; but in these, and other such examples, the nature of the malady, and not the state of the pulse, must determine the absolute necessity of blood-letting.

I sincerely hope that these and future quotations, though seemingly long, taken from different writers on febrile diseases, together with the annotations which I have presumed to make thereon, will, in many respects, place them and their treatment in a much clearer and more satisfactory light than heretofore. The principal and indeed great aim which I have in view is to endeavour as much as possible, to bring it into some regular

and fixed plan, which must be far more beneficial to mankind than the present unsettled, confused, and contradictory methods.

Dr. W. Philip, in his account of the state of the animal functions in the progress of typhus, continues to say, “The confusion of the head increases with the debility, and often on the second or third night a degree of delirium comes on, which frequently goes off, however, on the succeeding day, and continues to return in the evening for several days. As the symptoms increase, a wandering of the mind remains throughout the day, and sometimes rises at night, to a degree of phrensy, resembling the delirium of synocha. More frequently, however, the patient is rather stupid than violent. At a more advanced period, he continues uniformly sullen and sad, muttering to himself as if brooding over some misfortune. The countenance is dejected, and the eyes heavy and inflamed. When the evening exacerbations are remarkable, the countenance appears more lively, the dull appearance of the eyes especially is less observable, and the patient is then easily irritated, speaks quick, and answers hastily. In other cases insensibility, or as it is termed in fever, coma, comes on. If this increases, the jaw at length falls, and the patient lies in a state of apoplexy.”

Typhus will, from errors in judgment, often terminate in various other ways, and those Dr. Philip has enumerated,—(p. 131, 2)—but as his descriptions are a good deal similar to those extracted from the work of Dr. Thomas, it is needless to relate them here. On the deplorable subjects of fatal hemorrhagies in typhus,—(p. 138, 9, 148, 9, &c., of his treatise, petechiæ, p. 140,)—gangrene, &c., it is unnecessary to enlarge, as such terminations may all be avoided by a judicious adoption of the plans of treatment I have before endeavoured to make plain and clear to every one.

But Dr. Wilson Philip has lately published a pamphlet with the view of recommending that his system of a plurality of medical men, or half-practitioners, should be continued, and for this purpose he introduces into it the names of Drs. Jonas Malden and Charles Hastings. He might also have mentioned Dr. Lewis Evans, &c., as being of the same class. I have, however, already stated that every medical man ought to be *practically* acquainted with diseases, in all the separate departments of the profession, before he should be allowed to exercise the office of a physician, and to confirm this, it is of itself, quite sufficient to take a fair and candid review of the writings of these learned gentlemen, as they prove beyond the shadow of a doubt, that the greater part of their works are made up of erroneous theories, or delusive bubbles equally empty as fragile, not even rendered captivating by the usual additional charm of novelty; and that instead of presuming to direct others in the treatment of diseases, they themselves actually require to be directed. The reader will observe that these remarks are not mere assertions. They are every where supported by quotations and references, and numerous others might be given. The title to this dissertation, "The Physician's Guide," must now appear to every one perfectly appropriate. Until they can show that they *really* possess some superior knowledge of the nature and cure of what are called medical diseases, my assertion, which is founded on their own writings, will I am assured, be considered, by every reasonable and unbiassed person, to remain unconfuted; and that their system is artificial, and for the many reasons before stated, as likewise numerous others which may be mentioned, must be a powerful mean of retarding the progress and diffusion of medical knowledge, and consequently highly injurious to the public, as well therefore as derogatory to the dignity and respectability of the profession. Moreover,

learned Doctors, unless you prove, (what I verily believe you cannot,) that your knowledge of medical diseases is more extensive and profound than that of other persons who are acquainted with all the branches of the profession, some of those other persons may not only be apt to hold your pretended superior knowledge in “contempt,” but to assert and prove, that it is absolutely of a very inferior kind. I would therefore strenuously advise you, good and sapient Doctors, to shew your acumen, and refute, in print, on scientific and practical principles, without delay, every word and allusion I have dared to publish. The public, at least all those who no longer wish to remain dupes to your system, which is a libel on common sense, expect this from you.

Dr. Yule, in his “Observations on the Cure and Prevention of the Contagious Fever,” which pervaded the city of Edinburgh in the years 1817, 18, notices a complex case of a female, sixty years of age, who had, along with the most strongly marked symptoms of typhus fever, a short cough, oppressed breathing, and a sharp pain in the side, particularly on inspiration. He had her bled freely at the commencement of the disease, which certainly relieved both the head-ach and occasional delirium, and reduced the violence of all the concomitant symptoms. She recovered. The Doctor ridicules the tonic and stimulating system, but he says,—“BLEEDING, however, is a
 “practice in this fever which, with a *few* exceptions,
 “seems of *doubtful utility*; at any rate it must be had
 “recourse to early in the disease, before the action of the
 “*poison* has prostrated the strength of the patient, or else
 “omitted altogether. The opinion of my venerable friend
 “Dr. Wright, *is decidedly against bleeding AT ALL in this*
 “*disease*. His great experience, no doubt, occurred be-
 “tween the Tropics, where the climate powerfully accel-
 “erates the fate of the sick, *and the rapid career of the*
 “*disease does not admit of bleeding*. Here, and towards

“ the north of Europe, the action of the poison is, gener-
 “ ally at least, less rapid. But, at any rate, the great
 “ objection to this practice, supposing it were in other
 “ respects proper, is, that we are seldom called in at the
 “ BEGINNING OF THE DISEASE, WHERE ONLY the lancet
 “ can be used with PROBABLE SUCCESS.”

Dr. Yule has shewn the necessity of applying for early advice, and the danger of bleeding in the advanced stage of the disease ; but the propriety of either bleeding early or omitting it altogether, will, of course, depend much upon individual opinion, as, for instance, I have often taken away blood with the happiest effects from patients as late as the fourteenth day, and when their real or apparent prostration of strength might, according to Dr. Yule's ideas have arisen from the “ action of *infectious* “ *poison*,” and thereby occasion him, like Dr. Thomas, Dr. Wright, and many others, to prohibit entirely the use of the lancet ; whereas, on the contrary, I might attribute the prostration of strength, not to contagious poison, but to a general, or, what is more probable, a partial overfulness of the blood-vessels oppressing some vital organ, possibly the brain, and think that a cautious and well-proportioned bleeding was the most efficient, if not the only remedy, to save the life of the patient. See this subject already noticed under the head of typhus fever and directions to the public.

After the many able Treatises and Hospital Reports of Doctors R. Jackson, Dickson, of Clifton, &c., &c., on the diseases and fever of tropical climates, I am surprised at Dr. Yule quoting the single authority of Dr. Wright's assertion that the rapid career of the disease in these latitudes does not admit of bleeding. We are informed by Dr. Thomas, who practised many years in the West Indies, that in warm climates this fever seldom continues above a week or ten days, if so long ; and in opinion he seems to coincide with Dr. Wright ; but the gentlemen

whom I have above named, and many others whom I shall have occasion to notice, satisfactorily prove that the most successful treatment is to attack the disease with the lancet at, or, at farthest, within a very few hours of its commencement.

MERCURY.

“ But there is happily another remedy,” says Dr. Yule, “ which in my experience at least, can be used
 “ with invariable advantage, when bleeding would be at-
 “ tended with the utmost hazard. The free use of this
 “ invaluable remedy, (mercury,) in the very worst forms
 “ of acute diseases, would seem, like many of the most
 “ useful sciences, to have originated in the east. On the
 “ authority of Dr. Wright, I first began the use of it in
 “ the worst forms of contagious fever occasionally occur-
 “ ring in this city, and when *early* administered, with
 “ constant success, especially when combined with the
 “ necessary action of cold, the extent, as well as the
 “ medium of which, being of course, regulated by the
 “ circumstances of individual cases. One of the great
 “ advantages of the use of mercury, under the worst
 “ forms of this fever, is, that where cold bathing, even
 “ partially with the sponge, can scarcely be ventured
 “ upon, mercury may be used with the best prospect of
 “ success.” Mercury is very generally recommended
 by the practitioners of sultry climates, but they very ma-
 terially differ in opinion respecting its mode of action.
 In these climates fevers are commonly attended with
 local affections, for many of which mercury is a powerful
 remedy, but some seem to attribute its good property, at
 least in part, to its exciting the action of the skin, and
 producing a diaphoretic effect. “ By calomel,” says Dr.
 Wright, “ the pores of the skin were opened, a resolution
 “ of the fever was brought about, and the patient happily

“ recovered.” He, in another place, remarks, “ And we
 “ recollect of no instance, where mercury had been freely
 “ given, and persevered in till it shewed itself in the
 “ mouth, which was not attended with the happiest consequence.” For what precise purpose Dr. Yule employs mercury, he does not say ; for reasons, however, which will presently be given, I disapprove of his recommendation, of the *early* use of it in *acute* diseases, unless, indeed, it be as a purgative ; and the case which the Doctor records of a boy twelve years of age, confirms rather than disproves my argument. The Doctor attended the patient on the first week from his confinement to bed. The symptoms were great increased heat, comatose delirium, foul tongue, and bowels costive. Ten grains of calomel, at the Doctor’s first visit, were instantly administered in currant-jelly, and repeated next morning ; *a large quantity of black fœtid matter was discharged from the bowels.* The calomel the Doctor ordered to be repeated in smaller doses every night, and in a few days the edges and tip of the tongue became clean and moist. This favourable change began from the second day of the use of the medicine. The patient roused from the comatose delirium, and gradually a soft and gentle moisture appeared on the surface of the body. The morbid heat disappeared ; and a healthy secretion being restored, nature relieved from torpor and oppression, speedily resumed her power ; for, which affords a singular contrast to the effects resulting from what is termed the tonic practice, even when successful, the patient, under this treatment, instead of a state of protracted convalescence, very soon acquires his usual health.

Dr. Mills, of Dublin, has shewn, and I perfectly concur with him, that where the alimentary canal is loaded with feculent matter, keeping up symptoms similar to those in the above case, bleeding would effect little until after the operation of a brisk purge or two, and then it may not be

wanted, as I think Dr. Yule's case fully proves, although it appears he is not aware of this circumstance. When purgative medicines, indeed, have been neglected in the commencement of typhus, an extraordinary accumulation of *fæces* frequently exists in particularly the last stage, of course will cause an alarming oppression of the brain, with great depression of the natural powers, face flushed, eyes suffused, delirium, or attended with some degree of stupor, respiration high, tongue foul, together with a quick, uneven pulse. In cases of this description, which must be carefully distinguished from those of inflammatory excitement, (either acute or sub-acute), the taking away blood, even in the smallest proportion, might be highly dangerous ; I have very often, however, seen the most favourable change brought on by full doses of brisk cathartics, such as jalap with calomel, assisted by irritating enemata, the patient's strength being sustained during their operation by a temperate indulgence of good wine. In typhus far advanced, when cerebral oppression is thus secondary of loaded bowels, much may frequently be produced by the united employment of cathartics and cordials, care being taken that the former act with considerable freedom, and that the latter be given only to prevent the debility, without exciting the general circulation too powerfully. But in acute diseases accompanied with active inflammation, mercury is not the remedy that I would trust to alone in the early stage, either as a purgative, or for saturating or mercurializing the system, as it has been termed. I have before stated that the beneficial effects of purgatives do not arise so much from their merely removing irritating matter, as from the powerful qualities they possess of correcting disordered, and increasing diminished secretion of the organs concerned in digestion. Calomel exhibited in large doses, either alone or united with small quantities of jalap, so as to ensure its acting on the bowels, I can affirm, from much expe-

rience, is a remedy that tends greatly, in cases like Dr. Yule's, to relieve the brain, and equalise the circulation by carrying off foetid matter from the bowels, and exciting the various secretory organs. If the influence of the brain over the stomach and bowels appear striking and remarkable, it is not the less wonderful how speedily a change in the secreting surfaces of those parts operates back again upon the brain. Besides the immediate counter irritation of the brain, produced by purgatives, they are serviceable in withdrawing no inconsiderable quantity of fluid entirely out of the circulation; and more than this, like every other means which produces a powerful impression on the system, they seem occasionally to arrest the progress of fever, by breaking into and destroying the association of morbid actions which constitutes its formation. It is not the mere giving a purge or two that I am advocating, but the keeping up for two or three days a never-ceasing action, by regular repeated doses. But there are other causes which keep up and prolong fever, and before concluding my present remarks on Dr. Yule's case of typhus, I must warn the speculative and the unexperienced from hastily concluding, that inflammation, in which the head, chest, or belly, are apparently affected, always exists, as hasty conclusions, from a few leading symptoms, may be extremely deceptive. I have sometimes been called to typhus patients in a high state of delirium, with skin dry and burning; tongue parched, face flushed, and eyes red, covered with a great weight of bed-clothes, confined in rooms close heated, and permitted the most improper drink and food. The rooms, however, being liberally ventilated, the fires extinguished, the superfluous coverings removed, the tepid affusions employed, active purgatives exhibited, and an antiphlogistic regimen ordered, the most salutary change has in a short time been effected, and, by a perseverance in these

very simple means, rendered permanent. In such cases as that of Dr. Yule's from five to eight grains of calomel may be given to children, twice, or oftener daily, and with the happiest effects. It seldom produces ptyalism, or any other of those unpleasant effects that would result from the same quantity given in health. I have been thus diffuse on this subject, as I greatly apprehend that in the present rage for administering mercury in the early stage of acute diseases, with a view of producing ptyalism, and thereby a "new action" in the system, the above mentioned benefits have either been over looked or not sufficiently understood, and much mischief has consequently often been produced.

Many practitioners recommend the use of mercury in fever, and, like Drs. Yule, Wright, &c., would nearly rely wholly on its efficacy for their curative means, while many others think it extremely doubtful whether it has any effect at all in lessening fever. As the most opposite and eminently ambiguous opinions respecting the *modus operandi* of mercury have been and still "are held by men "whose distinguished talents claim the greatest respect," it is most important to have these determined, and with this view Dr. Wilson Philip, "equally zealous and successful to advance medical science," published in the year 1805, a pamphlet on its "Use and Abuse;" but after a lapse of fifteen years the Doctor has not been able to settle this great and certainly most momentous question, for in his book on fevers, page 197, he says, "with respect to the beneficial tendency of a mercurial affection of the mouth, even in the fevers of warm climates, it is by no means so well established as from the first view of the facts we should be inclined to believe. A considerable degree of fever tends to prevent this affection, so that when the fever abates from whatever cause, while there is much mercury in the habit, it is apt to come on, and may therefore be regarded rather as the

“ consequence than the cause of recovery, which, when
 “ it is considerable, it seems sometimes by its debilitating
 “ effects to retard. We have reason to believe, however,
 “ especially where fevers are accompanied with local af-
 “ fections, that a certain degree of it, or rather of the
 “ mercurial influence which it indicates, if it is not the
 “ chief means of cure, is favourable to the removal of
 “ fever. Respecting this point, as those who have had
 “ the most extensive opportunities of practising in the
 “ above fevers differ, *future experience must determine*.
 “ In the mean time it may be observed, that the bene-
 “ ficial effect of occasional mercurials in promoting the
 “ secretions, particularly in the early stages of fever, is
 “ acknowledged by the writers of all climates. When
 “ the biliary secretion is much deranged they are indis-
 “ pensable.” These observations are judicious. From
 the great length of the intestines, it cannot surprise us
 that copious and frequent motions should lessen the gen-
 eral excitement and the topical determinations; and, by
 doing so without the hazard of consequent debility, it
 naturally follows that they are peculiarly suited to the
 second stage of inflammatory fevers, after the lancet has
 been judiciously employed. But nearly in all cases of
 this description the abdominal secretions will be found
 somewhat disordered; and calomel not only aims at re-
 storing them to a natural state as a cathartic, but also
 exerts an influence over all the capillary system, which
 must of course equalise the circulation. That quantity
 of blood which in one or more parts was oppressively
 more than enough, calomel diffuses throughout the whole
 habit; but there are particular circumstances which must
 be subdued, before it can effect generally so advantageous
 a change. Should there be an excessive emergence of
 heat and arterial re-action, more especially when united
 with a cerebral determination of blood, the body will re-
 sist both the cathartic and the specific action of mercury;

therefore under such a diseased state, calomel will rarely be of utility, except in union with other depletory measures. When blood-letting, however, has been premised, or where evacuations of the bowels are simultaneously obtained, the whole excitement and its concomitant oppression, are so materially lessened, as to render the system permeable to the power of calomel; and then acting under the most favourable circumstances, it yields benefits which no other medicine can perform; in fact, it lessens agitation into calmness, like oil poured over agitated water.

I am always happy when I can with propriety agree with Dr. W. Philip in our medical researches and practice, and I again concur with him that “physicians will agree, “that we do not possess a more valuable medicine than “mercury. Not to mention the diseases for the cure of “which it was first introduced, which, without its aid, “almost uniformly prove fatal, and in which it is almost “uniformly successful, we may appeal for the truth of “this observation to its effects in some of the most dan- “gerous forms of scrophula, in dropsies of different kinds, “in inflammations, particularly chronic inflammations, “and induration and enlargement of the different viscera. “If we except worm cases, in which mercury probably “acts on the worms themselves, the various diseases in “which mercury is useful, may perhaps be reduced to “the two heads of inflammation and glandular obstruc- “tion. I believe there is nothing more erroneous than “the opinion, that mercury will occasionally succeed in “almost all diseases. This opinion has led to its employ- “ment in improper cases, and consequently tended to bring “it into discredit. I have never found it successful except “in the diseases here alluded to.” But it appears to me many physicians *ill-time* the administration of mercury in fevers and inflammations. We are told by some writers, “that it has an extraordinary *general* power of

“ checking *acute* inflammation.” Of this they are “ so certain, that were they to lose a patient from an *acute* inflammation, without having, in addition to bleeding, &c., made a *vigorous* attempt to affect the mouth by mercury, they should consider themselves accessory to his death.”!! Now, to judge from what I have seen of the subject; I am sure the advocates for this doctrine will require vigorous attempts to affect the system by mercury so as to produce salivation in *acute* inflammation, or where the inflammatory diathesis runs high. Wherever there is in fevers and other diseases great excitement manifested, such as a white tongue, flushed face, with prominent and vivid, or blood-shot eyes, and an accelerated pulse, or much throbbing of the carotid or temporal arteries, in whatever quantity or whatever manner mercury may be exhibited, the practitioner will scarcely ever succeed in eliciting ptyalism; on the contrary, generally all the symptoms of excitement will be aggravated. In cases of inflammation of the lungs, pleura, or brain, the general health is always disturbed, the circulation is hurried, the nervous system disordered, and the temperature of the body augmented, the constitution then partakes, as it were, of the disease, and so long as this is the case, to adopt such a practice, would indeed be cruel and unjustifiable.

The effect of this medicine is certainly determined by the condition of the system under which it is given. Experience and observation have proved mercury to be a sort of specific in certain states of local inflammations of the liver, and there being evidently a great determination of blood to this viscus in the yellow fever, practitioners were induced to employ it also with a view of exciting a degree of salivation; and where an incessant vomiting prevented their using the submuriat of mercury in sufficient doses to effect this, mercurial frictions were substituted. In some of these cases where the submuriat of

quicksilver was administered with this view, its quantity was obliged to be increased to an extent almost incredible. There has been cases, where four hundred grains were given before the salivary glands were affected; and in the Medical Commentaries for the year 1795, it was noticed, that a correspondent in Jamaica had reported an instance where, within the space of a few days, the patient had taken two hundred and seventy grains of it, and had rubbed in twenty drachms of the strongest mercurial ointment, from which the happiest effects were, it is said, at last produced. Therefore, say some writers, from the well-known efficacy of mercury in inflammations of the liver, it may, possibly be a proper and valuable remedy in typhus icterodes or yellow fever. However, to ensure its success, it should they say be employed at the very beginning of the disorder, and be so conducted as to affect the mouth before the dangerous symptoms of the second stage of the fever, make their appearance.

An eminent American physician informs us, that in every case in which he has seen mercury employed after the distressing and dangerous symptoms of the second stage had come on, it aggravated them and increased the danger; and that when resorted to after signs of what is called putrescency have made their appearance, it has invariably accelerated the fatal event. But, these restrictions, he adds, apply only to the internal use of mercury: for it may with safety be employed externally at any time of the disease, so long as the extremities continue warm, and the absorbents observe their power. In recouring to mercury, half a drachm, or even a drachm of the strongest ointment, may be rubbed into the thighs, hams, legs, and arms, every four hours, and submuriat of quicksilver internally, either by itself, or combined with opium, may be given, such as from two to four grains of the former, and half a grain of the latter made

into a pill with conserve of roses, and one should be repeated every four or five hours, according to the state of the bowels. When a gentle ptyalism takes place, the use of mercury should immediately be omitted, and a nourishing diet and wine given.

Some assert, that more patients have recovered by a mercurial treatment, if early adopted, than by bleeding, which, they say, appears a doubtful remedy, or any other mode, is obvious, as well from the practice of the naval and military hospitals in the different West India islands, as from the reports given by various private practitioners. In typhus icterodes there may possibly be congestions in the liver, both from an accumulated and imperfect secretion of bile: and mercury certainly possesses very stimulating and deobstruent properties.

Another eminent physician, however, tells us, that mercury administered so as to produce a salivation, is extremely equivocal in its operation: and that the good effects of the mercurial treatment have been greatly exaggerated: that many persons have died of this fever although mercury administered externally or internally had produced a copious salivary discharge, and that in many others who have recovered, the discharge did not begin, until after a solution or great mitigation of symptoms, and therefore could not have been the effect of the salivation. The use of mercury however is deemed as a purgative highly beneficial, and to this quality he ascribes its reported efficacy in all fevers.

From what has been said respecting inflammation of the liver, I may observe, that in its acute stage, if after having adopted blood-letting, and strictly pursued the antiphlogistic plan for six or seven days, the disorder is found not to give way, we may then resort to the assistance of mercury. Some practitioners, particularly in the East and West Indies, have recourse to it on the first attack, but the more prudent do not in general use it to

effect a mercurial operation, until the urgent inflammatory symptoms have been somewhat subdued by an antiphlogistic treatment. In every inflammatory affection of the liver, and where febrile excitement is present, but more especially in northern climates, although it may be proper to employ mercury as a cathartic at the very beginning of acute hepatitis, still it should not be used at that period with the view of promoting even the slightest degree of ptyalismus. The remedy in question when judiciously administered is certainly attended with extraordinary efficacy, but it is very improper on the first attack of acute hepatitis, which like other visceral inflammations, readily yields to a judicious plan of depletion. From a seeming want of knowledge of these circumstances, I have frequently seen much mischief done by some physicians, as well as other practitioners. Under the head of Hepatitis I shall notice some of those cases, and illustrate the subject more fully, at present relating only one instance.

The excitement from mercurial action very closely resembles febrile excitation, and this, it has been thought, might, in fevers, produce a “new action” in the system, and cure the original disease. This idea, however, although it has been much followed, is gratuitous; and I trust I have sufficiently shewn its inexpedience in cases where febrile excitement runs high. But what I now wish to animadvert upon, and particularly point out to censure, is that very *erroneous practice* of recommending a powerful remedy for a class of disorders which, arise from *opposite* causes, and exist in *opposite* states of the constitution.

A middle-aged married lady, of a sanguineous temperament, residing in the country, had for more than a year occasionally suffered greatly from a diseased state of the liver; the appetite for food was not very greatly impaired, but her digestion was ill-performed—her bowels generally

very costive, occasionally however very lax—the chronic inflammation of the liver sometimes assumed an acute character, at other times the biliary secretion was deficient or vitiated, as the discharges of the bowels evinced. Various acute flying pains in different parts of the body, together with a heavy dull pain in the forehead, afflicted the patient; the tongue was high coloured and partly furred, the pulse quick, hard, and full. She felt an extreme soreness in the regions of the stomach and liver, and had repeatedly experienced violent spasmodic attacks, either causing or from obstruction of bile, possibly the former. When I first saw her she appeared extremely yellow, particularly the conjunctive membrane of the eyes, together with a flush upon the cheeks. She had been attended for several months by her surgeon-apothecary, whose chief treatment seems to have consisted in repeated trials to produce salivation by the copious exhibition of mercury, but all without effect. She then consulted a physician, who agreed that her case was a liver disorder, and put her on repeated courses of mercurials, in various forms, which only produced an aggravation of her stomach complaint, and increased the irritation of her nervous system. The surgeon-apothecary complained that the doses of mercury were too small, for he had, he said, previously given it in much larger. To the mercurials the physician added dandelion, and large doses of opium were administered occasionally to quiet the spasmodic attacks. Having continued under the physicians care between five and six weeks without any amendment, her muscular emaciation, and precarious state of health, becoming daily more apparent, and despairing of a cure by the remedies employed, she at last consulted me. The narrative of the case was such as above stated. Finding the pulse very full and hard, I proposed venesection, and explained to her that in consequence of the blood-vessels being so very much over-

loaded, I was of opinion, that until they were relieved by bleeding, medicine would not have the desired effect.* She said that her former medical attendants were against blood-letting, and though it had been urged repeatedly to them, they constantly objected to it, but at one time as many leeches as would draw away *exactly four* ounces

* My opinion is fully corroborated by the following extract from a very recent Memoir on the Mechanism of Absorption in Red and Warm Blooded Animals, by Dr. Magendie of Paris. Absorption, although one of the most general and interesting of animal functions, has hitherto been treated with less precision than any other. The only satisfactory mode of searching for the laws of absorption, is to commence by ascertaining what are the actual organs by which the faculty is exercised. This is what Magendie proposed to effect, by a series of experiments instituted for the purpose; and the following are the deductions to which his experiments have led:—

“ 1. The red veins are endowed with an absorbing power.

“ 2. It is by no means proved, that the vessels by which chyle is absorbed are capable of absorbing any thing beside chyle.

“ 3. The absorbent power of the lymphatic vessels, beyond that of chyliferous absorption, is not by any means proved.

“ Magendie, in the first place, endeavoured to ascertain, by experiment, the influence upon absorption which should be excited by a state of fulness in the sanguiferous vessels. Having injected into the veins of a dog a certain quantity of water at the temperature of 40 centigrade, (105 Fahrenheit), he then introduced into the pleura a solution in alcohol of nux vomica, the absorption of which was proved by its speedy and powerful effects; the effects, however, were not so immediate as had been the case when the veins had not been thus previously injected; and in repeating the experiment with a still greater quantity of injected water in the veins, he found that the effects of the poison were, in the same measure, more tardy in showing themselves: at length, having thrown in as much water as it was possible for the animal to receive, while he continued alive, the poison which, in ordinary circumstances, would have operated in less than two minutes, had not affected at the end of half an hour.

“ The condition of the blood-vessels, in reference to their plenitude, was shown, by these experiments, to possess a considerable influence upon the absorbing power. What then it became interesting to ascertain, would be the effects of an opposite state of these vessels? This was likewise put to the test of experiment, in the following manner:—A dog having been largely bled, the same quantity of nux vomica solution was thrown in, as in the former experiments and the

of blood were directed to be applied to the epigastrium, which, having afforded some relief, she was not herself much against bleeding. She said she had been blistered, but always with much pain. The fact is, the parts were so very irritable that the blisters only increased the excitement. When I first examined the regions of the

“poison manifested itself in a little more than half a minute, while, under ordinary circumstances, it would have required two minutes to have produced the effect.

“The veins of another dog were opened, and a given quantity of blood having been withdrawn, it was replaced by an equal quantity of water: in this case, the absorption of the poison took place about the ordinary time.

“By this method of explaining absorption, we explain a number of other phenomena in the living system otherwise inexplicable; for example, the principle upon which dropsies are cured, the relief from congestion and inflammation produced by blood-letting, *the want of efficacy in medicines during those febrile states of the system in which the vascular system is greatly distended; the propriety of that practice which institutes blood-letting and purging prior to the administration of other active medicinal*s, the rationale of both partial and general dropsies, under circumstances of cardiac or pulmonary disorders; the use of ligatures upon limbs after the bite of venemous animals, in order to prevent the consequences of such accidents, &c.”

The Editors of the Gazette of Health, (No. 65, May, 1821,) with their usual ability, make the following observations on a new method of treating pulmonary consumption, which not only places the *modus operandi* of blood-letting in a new and important light, but forms an excellent supplement to what I have already stated, in the early part of this work, respecting the above disease and bronchitis. “Within the last twenty years,” they say, “several remedies and modes of treatment have been *strongly* recommended by professional men, and as many nostrums advertised, for the cure of *pulmonary consumption*. The Prussic acid, the Iceland moss, the uva ursi, Peruvian bark, tar vapour and water, the hedge hyssop, the foxglove, mercury, stramonium, oxygen, carburetted hydrogen, meadow saffron, the hemlock, &c. have still their advocates.

“An institution has been some years established in the City of London, for the purpose of ascertaining the effects of an atmosphere of a regular temperature in cases of pulmonary consumption, which the subscribers to the charity were led to believe, by the representation of Dr. Buxton and others, would immediately check the progress of the disease, and ultimately cure it. Such an institution in this metropolis was

liver and stomach, the parts were so tender that she scarcely could allow them to be touched, very slight pressure gave her acute pain, yet I found the place marked with ink by the physician, where the surgeon was in the evening to introduce a seton, a most extraordinary mode of proceeding ! The lady, however, resigned her-

“ therefore, on such authority, deemed a great desideratum, and many
 “ philanthropic characters contributed largely to enable the *benevolent*
 “ proposers to carry their plan into execution.

“ The *infallible* specifics for the *cure* of pulmonary consumption, sold at
 “ the patent medicine shops, even under “ Right Honourable patronage,”
 “ are also very numerous. Notwithstanding these discoveries of regular
 “ practitioners and the *infallible* specifics, &c., of *regular* and *irregular*
 “ quacks, the bills of mortality inform us, that at no period has the dis-
 “ ease proved more destructive to the human race than within the last
 “ five years !!

“ Many of the remedies recommended by professional gentlemen, as
 “ the Prussic acid, the colchicum, the hemlock, mercury, *uva ursi*, and
 “ hedge hyssop, are no doubt valuable *auxiliaries* to the *medical* treat-
 “ ment of the disease in different stages ; but we have no hesitation in
 “ asserting, that not one of them, either alone, or combined with others,
 “ ever succeeded in the *cure* of a case of *real* consumption. We often
 “ meet with a disease similar to pulmonary consumption, arising from
 “ morbid irritation throughout the membranous lining of the windpipe
 “ and its ramifications (Bronchia), attended with the *leading* symptoms
 “ of *real* consumption, as copious expectoration, harassing cough, quick
 “ pulse, and emaciation ; and in such case, the Prussic acid, and the
 “ vegetable anodyne, with the usual medicinal and dietetic auxiliaries
 “ as emulsions, blisters, asses’ milk, the Iceland moss, &c., by allaying
 “ the morbid irritation, will no doubt succeed in restoring the patient
 “ to health ; and the medical man who had been in attendance, not be-
 “ ing able to discriminate the membranous disease from *real* consump-
 “ tion, supposes that the remedies he employed, particularly the most
 “ *active* one, had succeeded in the cure of pulmonary consumption. In
 “ the far advanced stage of this membranous disease, or spurious con-
 “ sumption, which now depends on relaxation of the membrane, the *uva*
 “ *ursi*, the Peruvian bark, preparations of iron, as Griffith’s mixture,
 “ and mercury, will succeed in curing the disease, and hence the repu-
 “ tation some have assigned to them of curing pulmonary consumption.

“ The disease constituting *real* pulmonary consumption, extends be-
 “ yond the membrane, lining the windpipe and its branches. The cellu-
 “ lar substance of the lungs, termed pyrenchyma, is the seat of *true* pul-

self to my care, and having abstracted about a pint of blood from a vein in the arm, which greatly relieved both the head and chest. I ordered some active purges of calomel and jalap. The blood on standing threw up a very thick buffy crust, and the serum was of a deep yellow tinge. Two days afterwards the bleeding was re-

“ monary consumption. The spurious kind, as we have observed,
 “ depends on morbid irritation of the nerves, of the internal membrane
 “ of the windpipe and its branches ; but in true consumption there is or-
 “ ganic disease, the *structure* of the cellular substance of the lungs, &c.
 “ being altered or destroyed by partial suppurations, and from this seat
 “ of the malady, the irritation extends to the membrane lining the wind-
 “ pipe, &c

“ The spurious kind, we believe, very rarely, if ever, proves fatal,
 “ unless through injurious treatment, or unhealthy condition of the con-
 “ stitution, the irritation should extend to the substance of the lungs,
 “ and produce structural disorganization. The membranous disease is
 “ much influenced by states of the atmosphere, and generally terminates
 “ when it becomes mild. During its first stage anodynes and other
 “ constitutional remedies succeed in removing the cause. In the ad-
 “ vanced stage such treatment is injurious, and when continued, effusion
 “ of serum ensues, producing either general or local dropsy. Tonic and
 “ stimulating remedies, as the uva ursi, oxygen, sea air, preparations of
 “ iron, and the medicine containing balsam tolu, vinegar, iron, &c.
 “ with a generous diet, succeed in this stage of the malady, which, from
 “ the opacity and ill taste of the mucus expectorated, and the emaciation
 “ of the body, has strong resemblance to *true* pulmonary consumption.
 “ Hence the reputation medicines opposite in their qualities have ac-
 “ quired, as remedies for pulmonary consumption.

“ About fifteen years ago, we established a dispensary for consump-
 “ tive patients, under the patronage of his Majesty and several noble-
 “ men. We had often the pleasure of discharging patients, who, at the
 “ admission, were apparently in the last stage of pulmonary consumption,
 “ perfectly cured. We have had, however, as often the mortification of
 “ having patients, who, when they were admitted, were apparently not
 “ so ill as those whom we had restored to health, but in whom the dis-
 “ ease, notwithstanding we endeavoured to proportion our treatment to
 “ the obstinacy of the symptoms, advanced and terminated fatally.
 “ Further experience, observations, and dissections have satisfied our
 “ minds, that the cases in which we succeeded, were not *real* cases of
 “ pulmonary consumption ; that they were, in fact, the irritative affec-
 “ tion of the membrane lining the trachea, &c., unattended with dis-

peated, and the purging plan continued. In nine or ten days the vascular system being sufficiently unloaded, the general excitement subdued, and the disease localized, (but the functions of the chylopoietic viscera still faulty,) I then put the patient upon an alterative course of mercury, in conjunction with other pharmaceutical remedies,

“ eased structure, or catarrhal affections, in subjects disposed to pulmonary consumption or of scrofulous habits.

“ The spurious consumption, as we have termed it, in a dissertation on the Iceland Moss, the *membranous* or *mucous* species is easily distinguished from the *true* pulmonary consumption in all its stages. The true disease, on its commencement, is attended with great difficulty of breathing, palpitation of the heart, head-ach, stupor, giddiness, short dry cough and costiveness. The affection of the chest and head arises from the *mechanical* effects of the loaded state of the parenchyma of the lungs, which, to a person acquainted with anatomy, must appear obvious. The membranous or spurious sort, on the contrary, commences on the windpipe, often about the glottis; is unattended with palpitation of the heart; the paroxysms of cough are also longer, not excited by distending the lungs, nor by a deep inspiration, and attended with expectoration, generally of a saltish taste. The treatment proper in the former disease, is also applicable to the latter. The object in true consumption, as we have observed in a former number, is to *localize* the disease, that is to quiet the system, so that we may say the progress of the disease is not favoured by it. The treatment will succeed in *curing* the spurious kind, and in case cough, difficulty of breathing, still continue, we may for certainty conclude, that some organic mischief has commenced. Having rendered it, as it were local, we mean, with respect to the state of circulation of the blood and the nervous system, for we do not mean to infer that the disease is ever in this quiet state, not constitutional, or that the constitution is not in fault, with respect to the *nature* of the disease; the object of practice is to increase the action of the absorbents, for the removal of the matter deposited in the parenchyma, and thereby prevent suppuration and serious strictural mischief. This may be done by the cautious use of mercury and fox-glove, with the occasional use of the colchicum, aperients, bleeding or blistering, as the local symptoms or any constitutional disturbance may indicate. This stage we have termed the middle stage, being between the first and last stages. In proceeding with the view of removing interstitial deposit, we must take care to keep the system in a quiet state, by mild diet and by very gentle exercise.

and with great advantage. In about three weeks she was able to walk out. In little more than a month the appetite was regained, her stomach free from disordered feelings, the liver performing its office, the bowels being quite regular, all pain removed, and every ailment eradicated.

“ When the lungs have sustained structural disease from suppuration or ulceration in the cellular substance, &c., constituting the last stage of the disease our mode of proceeding must be changed. The object of practice is now to promote that process in the body termed *mutation*. That is, to remove the *diseased* structure, and to promote the deposition of healthy or new matter. Such a change cannot be effected by the use of sedatives and the quieting mode of treatment by diet, &c., which are generally employed. The inhalation of warm air, as recommended by Dr. Buxton and others, evidently favours the suppurative process, and in no stage of the disease, is it, in our opinion, proper. We have always found it to accelerate the disease in every stage, and during the last stage, to hasten considerably its fatal termination.

“ If its influence were confined to the *surface* of the body, it would, no doubt, prove a very useful auxiliary, by producing a determination of blood to the skin; but the application of it to the diseased organs is uniformly injurious, and we are persuaded that cases of real consumption have been brought by it to an unfavourable termination in two months, which would have run double that time. To derive advantage from a warm atmosphere, the exterior of the body should only be exposed to it, and the patient, at the same time, should inhale an atmosphere of a lower temperature.

“ To effect mutation of a diseased part, we must promote the action of the absorbent vessels, of the secerning extremities of arteries or nutrient vessels, and also that process in the system termed *sanguification* or making of blood. That diseased structure is often removed by a power in the system, and that the body is undergoing mutation, *i. e.* old particles removed, and new ones deposited, are facts, no man acquainted with physiology or surgery will deny.

“ By abstracting blood, to a certain extent, we know that the absorbent system is brought into greater action and the process of the *san-*
guification is also increased. Here then is a very powerful auxiliary in effecting a healthy mutation of structural disease, and experience has convinced us that true pulmonary consumption, even in its last stage, may be cured by its judicious employment, and a proper diet. The practitioner must keep in mind the object of bleeding. It is not indicated either by *general* or *local* plethora. It is, in fact, contra-
 “ indicated by the state of the sanguiferous system, and also by the gen-

In the above case, I could discover no symptom, as long as there remained high excitement, and the sanguiferous system loaded, that justified a regular exhibition of mercury. The acute and shooting pains the patient experienced in the region of the liver and stomach, were obviously symptoms of inflammatory excitement of the

“ eral health. The object is, to promote the process of sanguification, and
 “ to rouse the action of the absorbents. For these purposes, an ounce of
 “ blood, *from a vein*, will answer, when the sanguiferous system is not over-
 “ loaded, and general debility prevails, as well as twenty ounces,
 “ where an opposite state of the blood-vessels and the whole system
 “ exists.

“ After the loss of one or two ounces of *venous* blood, the pulse, in a
 “ day or two, will shew more strength and fulness, indicating that the
 “ powers of sanguification are roused. The body should be nourished
 “ by animal food, and a stomachic medicine employed (with or without
 “ an anodyne, as the state of lungs may indicate) to promote digestion.
 “ If the disease be so far advanced, that the strength of the system has
 “ very materially given way to it, venesection should not be employed
 “ until it has been invigorated by a meat diet or a stomachic. The
 “ meals should consist of animal food only, and that too with its *red*
 “ juices, as the inside of roasted beef or mutton. Animal food, in this
 “ state, is not only more nutritious, but more easily digested; than when
 “ rendered brown by roasting or boiling. It is more easily converted
 “ into chyme than vegetables, and the chyle formed from it is more rich,
 “ and consequently contributes more to sanguification and to the solid
 “ structure of the body. It is a remarkable fact, that butchers who
 “ live chiefly on animal food, are exempt from *true* pulmonary con-
 “ sumption. The object of this mode of treatment being to promote
 “ sanguification, and the mutation of diseased structure, animal food
 “ should be preferred.

“ Another fact of no small importance in this disease, is, that when a
 “ young person is confined to a vegetable diet, which is now a fashion-
 “ able practice, to prevent consumption, his body advances in height
 “ but not in bulk. His chest elongates but not expands, his neck also
 “ grows proportionally long, in fact, he becomes of that form or shape
 “ which is termed “ a *consumptive* make ;” whereas, when he is allowed
 “ a proper proportion of animal food, his body does not attain so great
 “ an height, and his chest expands. Instead of the consumptive form,
 “ his body spreads out ; he, in fact, gets in bulk what the other does in
 “ height. To deprive a person in a growing state of animal food, is
 “ therefore to predispose him to diseased lungs. We have not found
 “ meat, containing the *red* juice, or not rendered tough by over-roasting
 “ or boiling, and taken in moderation, to stimulate the system more than

peritoncal covering of those organs, (not of morbid derangement of the structure of the liver, as asserted by her former medical attendants,) which supposition is confirmed by the benefit derived from bleeding and cathartic medicines. Mercury, carried to the extent so as to affect the mouth in inflammatory excitement of mem-

“ a diet consisting entirely of vegetables. The latter is unquestionably
 “ more difficult of digestion than the inside of roasted meat. No set of
 “ men are more healthy than those who live on rare meat.

“ To enable the lungs to perform their *chemical* office in the system,
 “ viz. of decarbonizing the blood, the patient should breathe two or
 “ three times a day, a gallon or two of pure oxygen : or the pure oxygen
 “ may be diffused throughout the atmosphere of the room, by placing
 “ in the fire of the apartment a small iron retort, containing manganese,
 “ with a long pipe, the end of which may be placed in cold water, to
 “ render the oxygen cool. In proportion as the system fills, and the
 “ pulse gains strength and fulness, the venesection must be repeated,
 “ and the quantity of blood taken, increased. This mode of treatment
 “ we have found to succeed in a great variety of structural diseases.
 “ In noticing Dr. Gregory’s Treatise on Dropsy, we have made some
 “ observations on the effect of bleeding on the vital powers. Even in
 “ cases of direct debility, (that is unattended with either local or general
 “ plenitude) when the system of blood-vessels is rather under than over-
 “ loaded, when the heart acts languidly, arising from no apparent cause ;
 “ after tonic medicine, and stimulating means, had failed to invigorate
 “ the system, or in any degree to raise the vital powers, we have order-
 “ ed two or three ounces of blood to be taken from a vein, with the
 “ view of promoting the process of sanguification, &c., and we have
 “ found the practice to succeed, the pulse becoming stronger, and the
 “ appetite improving, in a day or two afterwards, and it is on this prin-
 “ ciple that bleeding has succeeded, in cases of debility, as dropsy,
 “ diabetes, advanced typhus fever, &c., &c.

“ Indeed, we are inclined to believe, that many local and general
 “ diseases are the consequences of suspension of the process of sanguifi-
 “ cation, as green sickness, organic diseases of the stomach, lungs, &c.
 “ and disorders of the digestive organs, the *nutrition* of the parts being
 “ in consequence either suspended or very imperfect ; and why abstrac-
 “ tion of blood, so highly extolled by some practitioners, as a remedy
 “ for diseases of debility, has not succeeded in the practice of others,
 “ is, we conceive, owing to its not having been properly regulated by
 “ the state of the sanguiferous system and general health. For in-
 “ stance, diabetes is sometimes attended with an overloaded state of
 “ the sanguiferous system, although the body is greatly emaciated, and

branes will uniformly be found injurious. The association of particular diseases with their common remedies, as stated nearly at the commencement of this work, is often so firmly imbued in the imagination of the physician as not to give way to the influence of reason; and this is especially the case with disorders of the liver, in which

“ in that case, the abstraction of blood, to promote the object, viz. of
 “ sanguification, should be copious; but when the system of blood-ves-
 “ sels is in an opposite state, the smallest abstraction of an ounce or two
 “ of blood will have the desired effect, and a large one, by reducing the
 “ vital powers, might endanger life.

“ In the process of making blood the nervous system is no doubt,
 “ much engaged, and by bringing it into healthy action, many diseases
 “ may be either relieved or cured. Bleeding is therefore not only an
 “ important remedy, in cases of inflammatory affections and of conges-
 “ tion of blood-vessels, but also in cases of direct debility.

“ Many medicines, no doubt, are capable of increasing the action of
 “ absorbent vessels, as mercury, fox-glove, &c., and in cases of organic
 “ diseases, as of the lungs, &c., they have afforded relief; but to *cure*
 “ the patient, or to remove diseased structure, it will also be necessary
 “ to promote sanguification, and to promote rich good chyle, and for
 “ these purposes bleeding, at intervals, and animal food, are the most
 “ powerful means.

“ That sanguification is increased by venesection is clear, from the
 “ plethora, which so soon follows it. By the system of purging, re-
 “ commended by Dr. Hamilton, sanguification and absorption are
 “ promoted; but as indigestion or chylication is thereby interrupted,
 “ it is not so efficacious as bleeding, where the object is to produce a
 “ healthy mutation. To this mode of treatment, which we have found
 “ successful in many cases of diseased lungs and bowels, many will ob-
 “ ject, because it is diametrically opposite to that which has been for
 “ many years employed by physicians of great experience and observa-
 “ tion. That practice, however, has *uniformly* failed. The object of
 “ our mode of treatment is the *cure* of a disease, which medical men of
 “ the first experience only attempt to palliate. It is a practice which
 “ medical men well acquainted with physiology and with animal life
 “ will not condemn; and we have no hesitation in stating, that the re-
 “ sults will render it very general.

“ When a lung is nearly destroyed by the ulcerative process, which is
 “ not uncommon, when the other is not much affected, we do not mean
 “ to say that by such a treatment the patient may be restored to health;
 “ but we do state, that when the disease is advanced in the last stage,
 “ the patient may be cured by it.”

mercury, in one form or other, has been by many exhibited, indiscriminately, in all cases, as a specific.

J. P. Chavasse, M. D. of Paris, in a letter, December, 1817, observes, “ I was not a little surprised, and indeed “ I may say, not a little hurt, on reading an observation “ by Dr. Adams, in his *Physical Journal*, stating that the

The more that is seen of both the true and the spurious pulmonary consumption, the more must it appear obvious to the observant practitioner, who is *untrammelled* by preconceptions regarding their real essence, that no state of the system can be stamped as the absolute something from which every symptom springs, as from a solitary source ; but it is the knowledge and application of these nice distinctions that mark the actual difference between a good and a bad practitioner. In the treatment requisite there is also a corresponding variety, which must ever be left to the individual and *unsystematic* discretion of the prescriber, for it is not easy to reduce it to a series of demonstrated propositions, except by the application of great medical acumen, and the exercise of that faculty which practice will improve but cannot bestow. General bleeding frequently preserves the vital principle from being overwhelmed by the force and sudden rush of the disorder ; but it must be truly unfortunate for a patient to be in the hands of a practitioner who should either refuse to bleed at all in pulmonary consumption, or should indiscriminately unsheath his lancet because its efficacy in promoting sanguification has in this disorder been urged. I can, however, safely and confidently assert, that the foregoing quotation is highly deserving the most serious attention of practitioners, and must be truly interesting to every reader, having myself been for a series of years successfully pursuing a mode of treatment upon similar principles, and can produce many instances of having carried young people through the disease, particularly those from about the age of puberty till the time when their general health becomes established. Having been led to again mention the subject of bronchitis, I shall now, in addition to what I before stated, (page 79, 80), respecting the necessity of guarding against falling into the error of mistaking the secondary affection of the throat for the primary disease, observe that those affections of children which principally consist of some deranged action of the brain, the windpipe appears frequently to be the actual seat of the disorder. Even dropsy of the brain often assumes a most deceitful resemblance, not to bronchitis only, but sometimes to actual croup. Of these consecutive, which might and indeed have been judged primary diseases, I have seen many notable cases ; and in some instances the secondary or sympathetic has proved nearly equal in magnitude and malignity to the primary and chief complaint.

“ medical reports and opinions from France are mere
 “ flights of fancy, and that the French are upwards of
 “ three centuries behind the English in Medical Science !!
 “ To prove the truth of this bold declaration, the Doctor
 “ gives extracts from works, the authors of which are not
 “ even known in France !! I am at a loss to conjecture

Dr. Uwins, of London, in his Medical Report of Diseases, published May, 1821, observes, “ rheumatism is still prevalent, but by no means
 “ in the same measure as during the three first months of the present
 “ year. If any affection has recently proved more conspicuous than
 “ another, it is a disordered state of the head, marked by pains of greater
 “ or less acuteness, and in some instances characterised by such une-
 “ quivocal signs of congestion in the blood-vessels, as loudly to call for
 “ the application of cupping-glasses to the neck. But even in these
 “ cases of congestive head-ach, the practitioner must not limit his re-
 “ medial resources to the letting out of blood, but must follow up de-
 “ pletion by those plans which prevent its further necessity ; and after
 “ a single bleeding, the immediate administration of exciting and tonic
 “ medicines will often prove surprisingly restorative.—Equal parts of
 “ the valerian root in powder, and the cinchona, or cascarilla bark, are
 “ almost daily used by the reporter in the cases now adverted to, and
 “ oftentimes with signal success.

“ The immediate succession of stimulating materials to a single pretty
 “ face and copious venesection, constitutes a principle and practice in
 “ medicine deserving of every regard. In how many instances may the
 “ vital power be preserved from total extinction by ammonia or opium,
 “ after a temporary exhaustion from debilitating measures ? And this
 “ practice, as above intimated, may not only prove thus immediately
 “ beneficial, but permanently operative, by conveying an energy and
 “ impulse to the weakened vessels, which counteracts that partial and
 “ irregular re-action that is otherwise often the result of liberal deple-
 “ tion. Even the management of actual inflammation ought always to
 “ be conducted with a recognition of the fact that, the disordered state,
 “ in spite of its being marked by violent perturbation and high activity,
 “ implies some degree or kind of vascular weakness. Although, then,
 “ the depletory hand must never be paralysed by the half-way feelings
 “ of hesitating indecision, yet, at times, it requires to be stayed by the
 “ recollection that the doctrine which assumes the inflammatory state to
 “ be one of capillary debility, is not founded merely upon hypothetical
 “ views, but has had its correctness substantiated by actual microscopical observation ”

I have not yet had an opportunity of perusing Mr. Swan's Treatise on Diseased Nerves, but in a review of it in the London Medical Repo-

“ in what respect we are so far behind your nation in
 “ medical knowledge. When I was in London, about
 “ ten years ago, I had an opportunity of ascertaining the
 “ state of the medical science in England. I certainly
 “ ly heard much of new theories and new remedies.
 “ Your physicians all pretended to have some favourite
 “ theory, but none seemed to me to act on any sound
 “ principle. The most prevalent opinion among those
 “ whose minds were below mediocrity was, that diseases
 “ arise from *some* derangement of the liver, but whether
 “ the secretion of the bile was in excess or otherwise, or
 “ whether its quality was too stimulating or too mild,
 “ were points that the most knowing ones had not posi-
 “ tively settled. Some even contended that the bile is
 “ conveyed to the stomach, although the bilious duct ter-
 “ minates in the intestines—one even contended that the
 “ bile ascends at the time the chyle descends. This was
 “ the theory of a loquacious physician in Finsbury-

sitory for May, 1821, it appeared to me that Dr. Uwins, the leading
 editor, agreed in opinion with Mr. Swan respecting the nature of in-
 flammation, which is materially different to “ the doctrine which as-
 “ sumes the inflammatory state to be one of capillary debility,” and I
 believe the Doctor will find there are many besides myself who think
 this doctrine is not yet “ correctly substantiated.” I have already
 stated, under the head of fever and inflammation, what I conceive to be
 the nature or essence of the latter, and as Dr. Uwins is really a man of
 science and observation, to it I beg to direct his attention, and shall
 keep a look out for his concurrence or refutation. I agree with the
 Doctor that “ after a single bleeding, the immediate administration of
 “ exciting and tonic medicines will,” in certain cases mentioned by him,
 “ often prove surprisingly restorative ;” but this, in the first instance,
 can only be done by exciting and giving tone to the nervous, which re-
 gulates the sanguiferous system,—and that to convey an energy and
 “ impulse to the weakened vessels, which counteracts that partial and
 “ irregular reaction that is otherwise often the result of liberal deple-
 “ tion,” can only be accomplished by remedies which act first salutarily
 on the nerves. In many instances I have found it necessary to carry the
 depleting treatment even further than the Doctor mentions, at the same
 time to administer alvine evacuants, before the exhibition of excitants
 and tonics.

“ square !!! Notwithstanding this diversity of opinions
 “ as to the nature of the derangement of the liver, mer-
 “ cury was the universal remedy, and so generally was
 “ this mineral in use in London, that I seldom saw a pre-
 “ scription in which some preparation of it was not or-
 “ dered.—If medical men of this country were to adopt
 “ the doctrines of derangements of the liver and employ
 “ calomel and arsenic to the same extent as many of the
 “ English physicians, I have no doubt but that it would
 “ prove very beneficial to our undertakers, and that the
 “ organic diseases of the viscera would become as preva-
 “ lent among us as they are in England. I do not mean
 “ to say, that the treatment of diseases in England is in-
 “ judicious, but that it is not applicable to the French
 “ people.”

Of the opinions of Dr. Mills, of Dublin, on blood-let-
 ting, I have spoken in approbation, but I certainly cannot
 do the same respecting the result of his enquiries into the
 influence of diseases of the liver, on the brain, lungs, &c.
 which he has recently communicated to the public. The
 Doctor brings forward a variety of cases, which, in *his*
 idea, prove that the brain is affected by disordered ac-
 tions *in* the liver ; that affections of the lungs originate *in*
 the liver ; that the heart is influenced by disease *in* the
 liver ; that the stomach is disordered by *obscure* marked
 disorders of the liver ; that dysenteric affections of the
 bowels are the effects of diseased action of the liver ; that
 gout often owes its origin to a morbid state of the liver ;
 that palsy originates in diseases of the liver ; that boils
 and affections of the cutaneous vessels arise from a viti-
 ated secretion of the liver ; that derangement of the ner-
 vous system is occasioned by a diseased state of the liver ;
 and that *several* organs may be at the same time affected
 through the medium of the liver !! The Doctor is also
 of opinion, that practitioners often fail in curing a disease
 in consequence of directing their remedies to the *secon-*

dary instead of the *primary* affection. Experience has convinced him “that diseases of the liver possess a *power* of remaining *latent*, and, as if to mislead the physician, of *sounding* considerable alarm in other quarters!!” and like an able general, by keeping up a regular attack on the strong hold of the enemy, he has paralysed his operations in other quarters. The liver is, in fact, the strong fortification of the enemy; and affections of other parts are merely false alarms. But we may naturally enquire of the learned Doctor, why the liver should be more liable to disease than any other part of the body; and why other organs should so sympathise with it as to disturb their functions, and derange their structure? The liver, no doubt, derives its nourishment, like other organs, from the blood, and its ability of exercising its office from the brain, or the ganglionic system: from what cause should it then be more liable to disease? Its secretion in the animal economy is not greater or even of so much importance as that of the kidneys, the stomach, or the pancreas; and therefore, why should the lungs or any organ suffer by its not duly performing its office more than by a disease, or sluggish state, of any other viscus? Moreover, we find, that a very great part of the liver may be destroyed by suppuration without materially affecting the secretion of bile, or interrupting the general health. The office of the stomach is to prepare materials for the nourishment of the body; the health of every organ must therefore greatly depend upon the proper performance of its functions; for if the chyle be not good, the body cannot be properly nourished. Dr. James Johnson, Surgeon to the Duke of Clarence, and Editor of the *Medico-Chirurgical Journal and Review*, treating “of functional and incipient organic derangements of the biliary organs,” in his “*Influence of the Atmosphere on the Health and Functions of the Human Frame*,” page 71, says, “Those mental causes which produce or aggravate corporeal

diseases, though apparently most, are in reality least within our power, either as to prevention or removal. The philosopher may declaim, and the divine may preach against the folly or danger of giving way to despondency and dread; but it is in vain! *Wherever there is derangement in the hepatic functions, there will in general, be low spirits—timidity—fickleness of mind—irritability of temper—and hypochondriacism*, whatever efforts we may make to the contrary by way of reasoning. Religion, it is true, is more powerful; but the corporeal disease is apt so to cloud the mental faculties, as to convert the bright hopes and consolations of revelation into gloomy superstition and unconquerable despair!" Now, as the liver, the stomach, and every other organ derive their nervous energy from the brain, and the ganglionic system, their powers of performing their offices must depend upon a healthy state of the brain, and, therefore, they are much more likely to be disturbed by an affection of the brain, than that the brain is to be disordered by them. In what way are we to account for the effects of disgusting objects in exciting vomiting? Will Drs. Mills and Johnson say that in that case, the liver was *primarily* affected, the brain secondly and lastly the stomach? Again, the power of religion, in either raising or lowering the spirits, must first act on the brain.

Dr. James Currie of London, Lecturer on the Theory and Practice of Physic, author of "Outlines of the Hepatic Theory of Medicine," &c., tells us, that in the contemplation of the liver, the enormous size of the organ, and its *extensive* and *complicated* circulation, we must on mature reflection conclude, that it is intended by nature for other and more important purposes, than supplying the mere secretion of excrementitious fluid, termed the bile. The more any one examines it, says the Doctor, the more he will be convinced of its *high* consequence in the animal economy, and that on the regularity of its

functions, the health of the system materially depends. In the tropical climates, *popular* feelings, we are told, have fully impressed the truth of this ; and on every indisposition, they look to the state of this organ as the criterion to go by, and their practice is regulated accordingly. The Doctor goes on to say, the blood passes not only in large quantity through this organ, but also in that *effete* state, which shews, that it has lost its active qualities, or that vivifying and animating principle, which renders it so necessary for the support and nourishment of the system. This organ then is the reservoir of that colluvies, which the returning circulation accumulates, after the wants of the body are supplied by the circulating stream. Whatever interrupts the energy of this part, whether vascular weakness or obstruction must derange the whole machine ; and, in the same manner, every cause of disease acting on the rest of the body, will particularly affect this organ. The Doctor, we are told, found that so sensible of this were the Asiatic-Europeans, that mercury, a remedy which, he says, of all others, acts with peculiar efficacy here, was the medicine they *entirely* trusted to ; and the form of calomel, from acting on the bowels, as well as on the liver, was universally their family specific. Dr. Chavasse, in his animadversions on the English practice, observes, that a Doctor from the East-Indies, then practising in London, even carried it loose in his waistcoat pocket, and sometimes took it mixed with snuff. Even in your nurseries the calomel bottle was as common as the magnesia bottle. “ At Guy’s Hospital, a pupil from Italy,” says Dr. Chavasse, “ told me, that he never knew Dr. Currie, (one of the physicians of the charity), write a prescription in which calomel was not specified, and so liberal were his doses, that the pupils termed it *Currie’s Powder*.” Mr. Stevenson, oculist in London, being accustomed to survey the upper regions, opposes, in a practical treatise on a morbid degree

of sensibility of the eye, the hepatic system of Drs. Currie, Mills, &c., and says, “ the prevailing doctrine which attributes almost every ailment incident to the human frame to a disordered state of the liver, has served to divert the attention of professional men from the brain as the *primary* seat of disease, and that assemblage of symptoms which has been too exclusively imputed to a disordered condition of the liver, is not unfrequently the result of a sympathy of the biliary and gastric organs with an excited state of the brain.” Dr. Uwins, in the oration he delivered on modern medicine at an annual meeting of the medical society, gave an excellent exposition of the origin and prevalence of the hepatic hypothesis of diseases ; but it is too long to be related in this place, and, to do it justice, it cannot be abridged. The following pertinent observation, however, which concludes the oration, is here particularly worthy of notice. “ It is frightful, indeed,” he says, “ to reflect upon the practical errors which must here have been committed by the decided devotees to the spasmodic and stimulant creeds, or to those creeds which failed to regard inflammatory and congestive conditions as of prime importance in the regulation of remedial agents. The great desideratum appears to be duly to appreciate *every* power and every principle of the animal frame. Let then every thing take but a temperate turn, and let the several parts of the whole machine be duly subordinated and regulated, and all will go on well. By the exercise of our own respective judgment, to select the good from the evil of *systematic extravagance*, and make a practical use of the same, we shall all, it is hoped, do good in our day and generation.”

The brain is certainly the primary spring of the animal machine, and therefore if the nervous system is of so much importance, how much more rational would this system of pathology be than the hepatic or prevailing one

of the present day ! I believe Dr. Harvey, who discovered the circulation, gave origin to the idea, that the blood is possessed of a *living principle*, and of course that the life of the body is derived from it. However celebrated he might deservedly be, as anatomist, physiologist, and physician, he certainly made very few converts, and he abandoned the notion. This opinion, however, was revived by Mr. John Hunter, and, by way of supporting it, advanced some positions which, in my opinion, are too imbecile to be named arguments. The late Dr. Adams, Mr. Abernethy, and some others, are so great admirers of John Hunter's peculiar doctrines, that they have adopted his singular physiological opinions, evidently without fairly examining them. It surely was incumbent in Mr. Hunter to prove that the blood was possessed of a living principle, at least, to suggest its origin. We may naturally enquire whence the living principle was derived ? The chyle from whence the blood is constituted, must be the product of *dead* matter. By what organ or process then can it be vitalized or endued with the vital principle ? If from the blood the body derives its vitality, the heart as well as the blood-vessels must be the first parts that would be formed, or, at least, they would constitute the chief parts of the foetus in its primary state. But, the human foetus, and indeed every other in its primary state, is without blood-vessels ! The first part formed in the gelatinous mass is the brain, and its branches, termed nerves, afterwards. We must therefore conclude, that the brain, as before stated, is the chief organ of the animal frame. In the animal economy, the uses to which the blood is subservient, are of very great consequence. The ingredients for the nourishing and repairing of the body are to this mass conveyed ; as likewise whatever the absorbent vessels may take up in the process of mutation of any part, or whatever may be exuberant, as serum, &c., &c. During respiration oxygen

is absorbed by the blood from the atmospheric air, and conveyed over the whole body in order to produce caloric or heat, which is certainly effected by the nervous fluid. The animating principle of all nature is the matter of heat. In order to keep up in the human system animal life, a greater degree of heat is indispensably requisite than usually exists in the circumambient atmosphere; hence the machine possesses the power of producing this active agent, (which is properly termed calorification), and the quantity is regulated by means of perspiration; and if placed in an atmosphere heated to upwards of two hundred degrees (Fahr.) it supports its natural temperature, and when placed in an atmosphere as low as thirty, the blood's temperature will not be changed. But the living animal frame having the power to produce the matter of heat, if this process be increased or diminished, the health of the body will be disturbed. It frequently runs so high as to destroy life in a few hours; a knowledge of its source then is surely of the utmost importance to the physician. The effect of lessened heat, in suspending or diminishing the vitality of animals, as also of vegetables, of increased heat, in promoting vegetation, rousing the animal functions, and in the incubation of an egg, are well known. When the power of this active agent in the different kingdoms of nature is maturely considered, it cannot be unreasonable to imagine, that if it be not the vital principle, it must be the means of keeping up the vitality of the body, and the action of those organs which are doomed to prepare nutriment for its support, and to promote its mutation. The fashion of calling all disorders nervous, which prevailed before the introduction of the bilious system, was infinitely more rational than that of ascribing all diseases, corporeal and mental, to a morbid state of the liver; for the brain, and its ramifications the nerves, are in general principally, if not primarily affected. But agreeably to the supporters of the doctrines of the

liver system, the brain and nervous system, in which the primary moving powers of the body undoubtedly reside, have nothing to do with disease. The liver is every thing with them ; to it we are desired even to look for the origin of a disease, as well as for assistance to subdue it ; and should mercury succeed in restoring a patient to health, no other proof it seems can, in their opinion, be necessary to convince the patient that their supposition was correct, as if mercury operated on no other part of the body. We are not told what part of the liver is diseased, or even the nature of the disease which interrupts its functions. If the disease be inflammatory, we know that inflammation principally depends on nerves,—not capillary debility,—for without nervous excitement there could not be any preternatural determination of blood to the part ; and as the nerves receive their energy from the brain, the disease surely may be traced to that organ. If the absorbent vessels be languid, or if the secerning vessels do not perform their office, we must still refer it to the brain, as from it they receive their power of acting. Of the use of the fluid secreted by the liver, in the animal economy, called bile, they are very far from being agreed. Is it excrementitious, or does it separate chyle in the duodenum from the digested mass received from the stomach ? The most specious hypothesis of the office of the liver is, that it disunites from the venous blood carburetted hydrogen, to prepare it for the alteration it is afterwards to undergo in the lungs. This appears to be the office of the liver, which acts in concert with the internal surface of the colon, the secretion of which is also excrementitious.

When the bile is so impeded, by the biliary duct being obstructed, that it cannot pass into the duodenum, the process of chylication is not interrupted, and the bile goes off with another excrementitious secretion, the urine ; and if a stimulating liquor be thrown up the rec-

tum so that the internal surface of the colon becomes irritated, the fæces will be tinged with the semblance of being properly altered with the bile. The nitro-muriatic bath exerts a powerful stimulus on every part of the alimentary canal, more particularly the portion termed the colon, from which operation arise its good effects, so greatly celebrated as a remedy for bilious complaints; for unless the absorbed acid causes griping pain the semblance of the ejected matter from the bowels will not undergo any alteration, nor indeed will any advantage be derived from it. When prudently employed, it is of considerable utility in particular combinations of disorder; but wherever a disposition to inflammation in any of the chylopoietic viscera exists, the symptoms cannot fail to be aggravated by it.

I would recommend inspectors of fæces to read attentively the remarks of Erasistratus on the effects of cathartics and other medicines on the colour of the alvine evacuations, and likewise to attend particularly to the effects of different vegetable and animal food on them. The change caused in the colour of the fæces by calomel, is more owing to its operation on the intestinal tube, especially that part called the colon, than on the liver; and should it not excite irritation in the colon, so as to produce griping pains or diarrhœa, there will be no essential alteration in the colour of the fæces. The chyle formed in the duodenum may be traced to the blood, and the fresh materials deposited for supporting the body by the secreting extremities of the arteries. The conveyance of the old particles of the body may likewise be traced by the absorbent vessels to the mass of blood, but how they are carried off from the system remains undetermined. This process which is going on continually in the animal machine, is called mutation, and as the old materials, or impure matter of the body, are re-conveyed to the mass of blood, it seems obvious that some organ

must act as a depurator or cleanser of the blood. We know that by the kidneys the impure and superfluous serum is divided from the blood, but it cannot be believed that the impure and solid parts pass off with it. Surely it must be of the utmost importance to know by what organ or by what part of the body the blood is depurated, for the health of the system as much depends on its employment as on that which prepares chyle for its nourishment. I am of opinion that the chief purifier of the blood is the liver, and that the bile is an excrementitious secretion. The great objection to this supposition is, that if the bile be an excrementitious discharge, it would not be emptied into the vessel in which the chyle or new materials for the system are formed. If the use of the bile promotes digestion, as supposed by some late writers, it would certainly be conveyed to the organ in which the solution of the food is effected, viz. the stomach; but I am aware this is not the case, although our patients continually tell us that their stomachs are overloaded with bile. Some practitioners are of opinion that the bile acts as a mean of union between the fat and the other part of the food, and that in consequence chyle is produced; but if this be its use, chyle would be tinged with bile instead of being white. When we examine the contents of the duodenum, the bile is found to be mingled with the residue of the chyme after the chyle is separated, and passes with it through the intestines. I would then ask this simple question, is the chyle divided from the chyme in consequence of the bile combining with its grosser parts? The bile is considered to be the sole cause of colour in the fæcal evacuations; but, although it be a principle colouring ingredient, it is not the only one. Of all animals the bilious secretion is, I believe, chemically the same; consequently the fæcal colour of them all should be similar; but so far is this from being the case, that the intestinal excretion of every animal is peculiar, as

well in colour as in figure and odour. We have here then direct proof that something else must act upon the rejected matters to make them fæculent, and this can nowhere be obtained but in the large intestines. In mice, which have neither gall-bladder nor colon-valve, the bile we know to be intensely bitter, limpid, and almost colourless. When the stomach of this animal is distended with food, recently received, the two first intestines, particularly the duodenum, have a very vascular appearance, and contain a quantity of bitter mucus. When this food has undergone the necessary change, and a portion of it has passed out of the stomach, the upper part of the alimentary canal contains a bland cream-coloured substance, here and there streaked with yellow, and very bitter. This appearance of the chylous matter, continues as far as the lower portion of the ileum, when it suddenly becomes very dark,—a colour which rather increases as we approach the extremity of the tube, whilst the fæces now feel gritty, and seem to have almost wholly lost the bitter principle of the bile. In the rectum they become hardened, and receive the form which we see when evacuated. There is also another supposition, which is, that the bile's acidity excites the peristaltic motion of the intestines; but if this be allowed, the most obstinate constiveness would be the consequence of the absence of bile from the intestines, from the biliary duct being completely obstructed; which complaint has been experienced by many for some weeks, and during that period their digestion was never better nor their bowels more regular. Moreover, it will be found on chemical examination of the bile, that it does not seem to possess any stimulating quality. If the office of the liver be not to purify the blood, it is probably for sanguification or making of blood; and that the bile is a consequent product, and being of an harmless nature, is conveyed to that part of the intestines nearest the liver. When obstruction of the biliary

duct takes place, the bile is conveyed by the absorbent vessels of the liver to the mass of blood, without exciting irritation of the vessels, or the general health being disturbed ; and being separated from the blood by the kidneys, passes off with the urine.

If we examine the contents of the colon, we shall find them differing in colour as well as in odour, to those of the duodenum. The former is likewise distended more or less with hydrogen gas, at the same time that that in the latter is carbonic acid gas. We shall likewise find that if the internal surface of the colon be stimulated by an injection, that a considerable thick secretion of a very disagreeable odour, will take place from it. It will also be found that after the stomach and duodenum have been emptied by aperient medicines, or that the patient has fasted two or three days, fæces in substance are evacuated in considerable quantity. It will therefore be obvious from these circumstances that the colon executes an office different to that of the duodenum. It therefore seems evident, that the fæces are performed in the colon, and that the greatest portion of that which may be evacuated is a secretion from its internal surface. Chylification, for the nourishment of the body, takes place in the duodenum, and fæcification in the colon, by which impurities or the old particles of the body are divided from the blood ; from this we may conclude, as well as from its size and length, that the function of the colon in the animal economy is most important, and from torpor or sluggishness of this viscus more serious diseases arise than from a disordered state of the digestive viscera. Morbid irritation, or organic disease in it, from the extent of its occupation in the abdomen, is frequently referred to the liver, the stomach, or the kidneys, as it passes from under the right kidney by the gall bladder, near the great convexity of the stomach under the spleen, it then runs down on the fore side of the left kidney, and turns to-

wards the back-bone, where it ends in a double encurvature. Dr. James Johnson, before mentioned, in his "Influence of the Atmosphere," &c. (page 66), says "the *cutaneo-hepatic sympathy*, or consent between the skin and liver has never been noticed till I traced its influence in the production of tropical diseases. I there hinted, that I could have extended my essay by explaining the inveteracy and indeed mortality of ulcers in hot climates. During the last seven years, my observations on a large class of cutaneous defædations have tended to confirm me in the idea there broached; namely, that not only those local sores, which Mr. Abernethy has traced to disordered states of the chylipoietic viscera, but also *a very great proportion of cutaneous eruptions and defædations are dependent on derangements of the biliary secretion*. Purgatives, diaphoretics, and mercurials, the three grand means of cure in the greatest number of cutaneous complaints, are, in reality, the most effective measures we can use in augmenting and ameliorating the biliary secretion." I have already stated, as my opinion, that structural or even functional derangements of the liver are not of that frequency nor of that importance which Dr. J. Johnson and some others suppose; and that the cure of those "cutaneous defædations," which he mentions, appear to me to depend more on bringing the gastric and intestinal secretions into a healthy state, so as to promote digestion in the stomach, chyliification in the duodenum, and fæcification in the colon, than to the liver, or its secretion the bile. To Mr. Abernethy much credit is unquestionably due for pointing out to practitioners the great consequence of strictly attending to the general health of their patients, in all cases of local diseases, especially to the condition of the digestive organs, by which many local diseases may be cured without having recourse to the knife, and a favourable result may be ensured when

an operation is necessary. Here, however, our commendation of his system must terminate ; because the practice of administering the blue pill and a tonic medicine in cases of local disease, is by no means of recent date, being the oldest we have on record. But Mr. Abernethy's system is incomplete, as he extends it no further than to the nourishment of the body, without attempting to explain by what means mutation is carried on, without which the state of the body cannot be healthy. And again, his chylopoietic doctrines made converts of many professional men, who were capable only of taking a contracted view of them. His intention was, no doubt, to lay down a system for young practitioners, by which they may do much good, and could not possibly do mischief. The object of his practice consists in allaying morbid irritation of the stomach, in producing healthy digestion, and keeping up a regular action of the intestines, and when these are effected, a condition of system succeeds, unfavourable to a great variety of diseases. The Abernethian and Hamiltonian systems, I have compared under the head of cathartics. The French seem convinced, from the frequent use of lavements, that they contribute more to the preservation of health than any other remedy. In every cutaneous disease, which the ancients ascribed to the foulness of blood, this is a most popular remedy, and indeed many practitioners of eminence have employed them with the most decided benefit; no doubt the salutary effects arise from its promoting fæcification or the purification of the blood. We also find that patients, particularly those whose nervous systems are easily disordered, always find themselves greatly better when fæcification is going on ; a symptom of which is the extrication of hydrogen gas. This important fact has entirely escaped the attention of the hepatic theorists. This gas is found to exist in the venous blood, and it is probably disengaged from it during the formation of fæces. If then this

supposition of the office of the colon be correct, the system of mutation is by it completed. But admitting that the organs by which the mutation of the body is effected be thus made out, we nevertheless should still take into consideration in the treatment of disease the state of the other organs of the body. From the brain the mutation system derives its power of acting, through the medium of nerves, the state of that organ therefore claims great attention. If its action be lessened in consequence of compression by over-distended blood-vessels, every other organ will be enfeebled, we therefore find indigestion and constipation regular attendants on plethoric or an overloaded state of the sanguiferous system ; ought we then, in such cases, to expose the patient to the same mode of treatment as if the blood-vessels existed in an opposite condition. I am fully convinced, that very many of the complaints, denominated *nervous*, (characterised chiefly by a great susceptibility to external impressions, head-ach occasionally, accompanied with lowness of spirits, restlessness, anxiety, &c., the primary seat of which is generally referred to a disordered state of the liver or stomach,) are the consequences of an inflammatory or congestive condition of the brain ; that the mode of relief most effectual consists in unloading the vessels of the head by local blood-letting, the exhibition of aperient medicines, and the usual means of counter-irritation, as blisters to the nape of the neck, and sinapisms to the feet. Indigestion, &c., are likewise attended both on an increased and on a diminished excitability of the cerebral system (the brain and nerves) ; and in such cases surely the same mode of treatment cannot be proper. The minds of many physicians seem more bent on pointing out a variety of species of a disease, and distinguishing them by high-sounding names, than endeavouring to form a system of medicine, on a knowledge of the laws of the animal system, so that a practitioner might know what he has to regulate under

local or general derangements. The first object of a nosological practitioner is to ascertain by the symptoms, the name of the malady of his patient; and when he has accomplished this, the remedy is, at it were, concatenated. If the disease, therefore, be hysteria, the young practitioner (and I am sorry to say, too many of the elder,) immediately thinks of assafoetida, ether, or some other favourite antispasmodic, which are indiscriminately administered, without taking into consideration the condition of the system, with regard to plenitude, or whether the morbid excitement of the nervous system be from augmented or lessened vitality. Should the symptoms denote indigestion, stimulating and tonic medicines are instantly thought of, without duly considering if the complaint of the stomach arises from morbid irritation, or from debility, and if the latter, whether it be direct or indirect. Over-distension of the blood vessels of the head, by compressing the brain, is a very common cause of indigestion in elderly people; and stimulating medicines, in such cases, by increasing the impetus of blood, may produce apoplexy. The stomach too sympathizes, more or less, through the medium of the nerves, with every part of the human frame; its functions must therefore be often disturbed by morbid action, even in the most distant organ. In such cases attention certainly should be paid to the original disease. But when the stomach is sympathetically disordered, we diminish the primary disease, by quieting those parts which may sympathize with the organ primarily affected. Even when the irritation commences in the brain and nervous system, we powerfully subdue it, by keeping the stomach quiet, with which the brain particularly sympathizes.

“ There is a species of head-ach by no means uncommon in this country, which seems to have escaped the attention of medical writers.—It commences with great dimness of sight, which after a few minutes is succeed-

“ ed by an obtuse kind of sensation through the brain,
 “ with an incapacity to exercise the intellectual functions.
 “ The extremities and the scalp become cold, the pulse
 “ feeble, and the pupils of the eyes much dilated. It is
 “ not attended with any increased determination of blood
 “ to the brain or of any disorder of the stomach. It ap-
 “ pears that the electrical or galvanic powers of the brain
 “ are nearly suspended, and that the energising nervous
 “ fluid is not distributed over the body in sufficient quan-
 “ tity Sometimes vomiting comes on which often ter-
 “ minates the paroxysm, the circulation becoming
 “ more active and the extremities of a proper warmth.
 “ The vomiting seems to be an effort of nature to rouse
 “ the energy of the brain so as to enable it to disperse the
 “ accumulated nervous fluid ; for the ejected matter from
 “ the stomach does not shew that that organ was in fault.
 “ Warm applications to the extremities, especially such
 “ as possess a stimulating power independent of heat, as
 “ a mustard poultice, is in general beneficial by occasion-
 “ ing a determination of nervous fluid to them, and there-
 “ by unloading the brain of its accumulation. Sneezing,
 “ excited by the compound asarabacca powder, is uni-
 “ formly beneficial by rousing the action of the brain.
 “ Stimulants taken into the stomach are also serviceable
 “ on the same principle as stimulants to the extremities.
 “ As an internal stimulant, the saturated tincture of cu-
 “ bebs has been found the most successful. Galvanism
 “ is also a very efficacious auxiliary. When the com-
 “ plaint abates, the patient experiences a curious vibra-
 “ ting or prickling sensation along the principal nerves,
 “ and many have observed that they felt as if something
 “ was running from the head to the feet.”

In the intestinal canal, there are two sorts of air evolved,
 to an extent as to prove a source of annoyance. The
 carbonic acid gas is that in the stomach, the hydrogen or
 inflammable gas is that in the inferior part of the intes-

tines, viz., in the colon. The carbonic acid air disengaged in the stomach, is the product of fermentation.

The food, both animal and vegetable, is converted into chyme by the chemical action of a fluid, secreted by the glands of the stomach, called the gastric fluid, and is mixed together, so as to form an uniform mass, by the action of the stomach. If the gastric juice be healthy, the food proper, and the stomach not overloaded, digestion will be performed without carbonic acid gas being produced; but should the stomach be in a state of increased or diminished excitement, the secretion of gastric juice will not be healthy, and therefore not equal to the proper solution of food. We find in this case, that digestion is assisted or finished by fermentation, which seems to me, when the gastric juice is unable to effect a solution, to be nature's secondary process of digestion. During this secondary process, the products of fermentation appear as carbonic acid gas, &c.

It is of the utmost importance that the practitioner should have a correct diagnostic of, or the means to distinguish indigestion arising from increased or inflammatory excitement of the stomach, from that which is the consequence of diminished excitement or atony. The stomach is obviously in a state of increased excitement when indigestion is accompanied with either heart-burn, vomiting of an acid, or cramp in the stomach. Should any stimulus, as brandy or other spirituous liquor, on being swallowed, produce a sense of heat in the stomach, and a feverish state of the system, or if confusion of the head follows a full meal, they afford corroborating proofs of increased or inflammatory excitement. When the excitement of the stomach is in an augmented condition, or in a *feverish* state, which is usually the case with great eaters, inebriates, and gouty subjects, the temperature exceeds its natural standard, consequently fermentation, as before mentioned, hastily advances to the acetous state,

and an acid is frequently produced so strong as to occasion much irritation and pain in the stomach, known by the name heartburn. This sensation is frequently extremely painful, particularly when the stomach contracts on the acid contents after eructation or the escape of gas by the gullet. But I do not believe that the acid which forms in the stomach of those who have bad digestion, occasioning heart-burn, is always the product of fermentation, for it is often vomited a few minutes after swallowing *any* liquid, and in so short a time the acetic acid surely could not be formed out of the stomach in any degree of temperature; moreover, the acid is much more powerful than vinegar, as is obvious to the taste and action on the teeth, and even exceeds the quantity of liquor that was taken. Now, if one twentieth part of the acid that was brought up from the stomach cannot by any mode be procured from the article that was taken, we must infer, that the acid is a morbid secretion of the stomach, and indeed the idea is corroborated by the sudden paroxysms of heartburn, dyspeptic patients experience, although no article capable of the fermentative process had been taken by them for some time, which are, no doubt, the consequence of a sudden secretion into the stomach of an acid of an animal nature, and which is probably, similar to the acid that has recently been detected in the human calculi, termed *uric*. Professor Cullen ascribed indigestion to debility of the muscular fibres of the stomach, although numerous arguments, even in his time, might have been urged to prove, that the secretions from the blood-vessels and glands of that part depended upon the influence of the nerves, and not upon the state of the muscular fibres. For instance, passions of the mind, and sympathy with other parts of the body, induce dyspepsia, as Dr. Cullen himself has allowed; and it is not easy to imagine how he could have supposed that such causes could debilitate the muscular fibres of the

stomach, when the more evident explanation surely must have been, that they affect its nerves. It is well known, that of late years, it has been fashionable, especially in the higher ranks of society in this empire, for almost every individual to attribute his bodily affliction to bile; but whether to an excessive or scanty secretion of it they could not say. The above symptoms, however, viz., acidity, flatulence, nausea, head-ach, pain in the stomach, &c., were with them, satisfactory tokens of the presence of vitiated bile in the stomach, and the delusion is far from having yet subsided. Indeed popular prejudices seem to have even led practitioners into this error. It is however, a duty incumbent on them, notwithstanding hazardous as it may be for any individual to oppose popular prejudice, to act according to his own deliberate judgment, in every instance of serious indisposition, respecting the nature of the case, and not in compliance with the caprice of the patient.

But the stomach is obviously in a state of debility or diminished excitement, if the patient be free from heart-burn, if a sense of oppression be produced by full meals, if in three or four hours after a meal the stomach becomes distended with air, and if brandy or other stimulants, instead of producing pain, are grateful to the stomach, and when the whole system appears to be invigorated by a meal or by wine. When the excitement of the stomach is in a debilitated or *lessened* condition, which is usually accompanied with a languid circulation, pallid skin, cold extremities, the muscular system generally relaxed, and sometimes with a strong disposition to dropsical swelling of the legs, the fermentation advances only to the first stage. Patients of this description are, consequently, free from acidity and heart-burn, their only complaint being flatulence or distension of the stomach. The cause of the process of which flatulence is the product, must therefore be very opposite, the one arising from in-

creased excitement (which is by far the most common) and the other from relaxation or the stomach being debilitated, which occurs mostly in elderly people or from intemperance.

Flatulence of the stomach is therefore neither more nor less than a disordered state of that organ, and of course the medical and dietetic treatment must be regulated by the nature of that state. The increased excitement is generally the consequence of luxurious living, or the abuse of vinous or spirituous liquors. In such cases the object of practice is to allay the morbid irritation of the stomach, by quieting or cooling medicines, and by no means to stimulate it with aromatics, or with a view to strengthen it, administer bitters or astringents, which is a practice too common. The saline mixture and cathartic medicines, in such cases, will prove the best stomachic. I would, however, recommend a solution of the tartaric acid and the carbonate of soda, to be taken twice a day in an effervescent state. The carbonic acid gas thus evolved, will very much promote its effects in soothing morbid irritation in the stomach; and the tartrate of soda, which forms, serves to keep the bowels open. If the exciting cause be avoided, this remedy will succeed in recent cases; but should the complaint be of long standing, we must have recourse to a more powerful medicine in order to allay the irritation of the nerves of the stomach, and recently the tincture of hop, (made from the seed of the plant,) has been found to answer much better than any other remedy. It quiets excessive nervous irritation without producing costiveness, or impairing, like opium, the tone of the stomach, and thereby increasing the primary affection. From twenty to thirty drops of this tincture should be taken in a glass of water about two hours before dinner, and about the same time before supper; or in case the bowels are not sufficiently relieved, daily, in the solution of the tartaric acid and carbonate of soda, in

a state of effervescence. In order to bring the gastric glands into a healthy condition, or to remove any indisposition in the walls of the stomach, more especially in the pylorus (which generally exists in long standing cases) four grains of the blue pill should likewise be taken every other night, for a fortnight, and repeated every month, till a healthy state of the stomach is obvious. If in the course of a month this treatment should fail, in restoring the stomach to health, we may be assured some organic or structural disease has taken place, and in order to remove it, we must not only produce mutation by promoting the action of the absorbent system by the blue pill, but also promote sanguification, and produce rich good chyle, for which purposes bleeding, at intervals, and animal food, are the most powerful means. Of all the systems that have been broached, in this or any other country, I assert, that this is the only one calculated to place the body in a state of health; and when in that condition, what are the diseases, general or local, that will continue to exist? When acidity prevails so much as to occasion the sensation called heart-burn, from ten to thirty grains of carbonate of soda may be occasionally taken in a quarter of a pint of pure water. Those who are afflicted with or subject to this complaint, should always avoid those articles of diet which have a tendency to fermentation, such as sweet vegetables, sugar, pastry, preserves, and especially those articles which are in a vinous state, such as new malt-liquor, and wine, particularly home made. I have already observed, that the acid formed in the stomachs of people whose digestion is bad, is often of an animal nature, and not always the consequence of fermentation, as generally supposed; therefore, in some cases, the swallowing a small quantity, about a tea spoonful, of the acetic acid, not only tends to cool the body and correct the velocity of the circulation, but to promote digestion. These circumstances may explain why lemon

juice and vinegar, used in aliments, and the tartaric acid which exists in old wine, are sometimes more salubrious than otherwise, and as to the acid of malt-liquor, which is the acetic, it is not formed until it has been kept for a length of time, and such liquor is therefore sometimes much more wholesome than new beer, which abounds with saccharine matter. By attention to these circumstances, those who are afflicted with, or subject to, complaints of the digestive organs may on many occasions be the best judges of what is proper to select for their individual cases. Animal food underdone should also be taken, and with it farinaceous vegetables, as potatoes, unleavened bread, &c. Their food should be well masticated, for by so doing, it will not only be divided, but mingled with the saliva, which must promote its solution in the stomach. Pure water is the best beverage during meals; but if the patient has been accustomed to take wine or spirits, a small quantity of brandy may be taken with it, during or after dinner. If he be of a gouty or rheumatic habit, from thirty to forty drops of the alkaline tincture of the colchicum seeds may be taken with each dose of the tincture of hop. Should the patient be subject to head-ach, or his nervous system too excitable, he ought with a napkin to apply cold water to the head or the shower bath every other morning, or oftener if necessary, and keep the feet warm by the use of flannel socks.

But when the stomach is in an enfeebled state, or diminished excitement, an aromatic tonic medicine will be necessary. I can recommend the aromatic tincture of rhatany with the compound spirit of ammonia; and, should the bowels be in a torpid or sluggish state, which is frequently the case, a *warm* cathartic pill may be taken every other day, or oftener if required, not only to obviate costiveness, but in order to produce one evacuation daily; the aromatic pill, or a pill of rhubarb and ginger is most proper. In this case, saline medicines generally

prove pernicious. As before mentioned, the blue pill will also be proper, in order to bring the walls of the stomach into a healthy state. If the secretion of urine be defective, or the legs œdematous, we may add, to each dose of the aromatic tincture of rhatany root, &c., from twenty to thirty drops of the tincture of squills. With the animal and vegetable food, as before recommended, may be taken good port, sherry, or Madeira wine, or brandy and water, but in such quantities only as will gently stimulate the stomach, and not influence the system, or increase the afflux of blood to the head. Every physiologist must know, that the stomach, as well as every other organ receives its power of performing its office from the brain; when, therefore, it does not properly perform its functions, in consequence of debility of brain or branches of nervous system, a remedy that is capable of acting directly on them will be necessary; the galvanic fluid is such a remedy: and many cases of general nervous debility, and especially of the stomach, which had resisted the use of powerful tonic medicines, have of late been cured by it. In those cases of debility of the *primary moving powers* of the body, which, by the bilious doctrine and practice, would be quickly brought to an unfavourable issue, oxygen or vital air is another powerful auxiliary. By inhaling this gas, during the use of galvanism, the whole system is so invigorated, that not only effusions of serum in the cellular membrane of the extremities have been speedily removed, but the stomach rendered capable of performing its office, and the patient soon restored to health. Even in cases of dropsy of the abdomen and extremities, the beneficial effects of the combined use of these remedies have been experienced.

The structure of the intestines, viewed anatomically, point out that two sorts of liquors are poured into them, which no doubt have their separate uses in the animal economy, and that their excess or diminution must be

sources of derangements of the general health. The glandular secretions being the products of more complicated structures than the secretions from mucous and serous membranes, are evidently more readily deranged, and when they are deranged, cured with much more difficulty. Experience tells us, that, in general, very different kinds of intestinal ejections are the products of saline and drastic or mercurial purges, as already noticed under the head of cathartics, and that in most instances, where the stomach, &c., are the springs of general derangement, as likewise in those where the secretions of the viscera are in an indolent state, (in primary fever for example), very much more benefit might be derived from the use of the last than from the first, notwithstanding the production of each shall be the same in regard to quantity. It therefore seems evident to me, that the more complicated structure of the secretory glands of the chylopoietic organs (in which we may include the liver) demands when their action is inactive or morbid, excitants more forcible than the mere simpler structure of the mucous membrane: for the former the remedy being the drastic purges, and for the latter the saline.

I am confident that more cures may be effected, in a variety of diseases, through the medium of cathartics operating on the bowels, than by any other mode whatsoever: the liver, therefore, being a complicated viscus, of which the physiology is not fully known, has been *erroneously* supposed the principal cause of all those morbid affections of the general system, which the action of cathartics is capable of relieving. This sweeping conclusion, however, may not only be considered as unfriendly to the improvement of the practice of medicine, but is likewise become adopted so extensively, particularly in this country, that bile and disease are considered one and the same thing, which must very frequently lead to the most improper treatment. But it appears the hepatic

farce, in all its Proteian shapes, is to be even more stoutly maintained than ever, as no less than four books on *bilious* complaints, or derangements of the liver, have issued from the press during the month of May, one by Dr. Ayre, of Hull; another by Dr. W. Philip, late Physician to the Worcester Infirmary; one by a Mr. Hare, Fellow of the Royal College of Surgeons, F. L. S. of London; and one by a Dr. Jackson; and on these subjects there are also notices of two works being in the press, by Dr. Jordan, of London, and Dr. Solomon, of Birmingham. Six publications on bilious complaints in a few weeks !!! Well done erudite Doctors.—

When energizing objects men pursue,
What are the prodigies they cannot do.—POPE.

Approach, ye learned, and judge if *they* depart,
Unequal, from the precepts of *their* art.—BOOK-MAKING.

DR. JAMES JOHNSON'S PREFACE.

Although the liver may be of much importance, and its functions easily deranged, yet there are other viscera of equal importance and delicacy belonging to the same system, and which I have already noticed. From the situation of the large intestines, their great extent of surface, and the very many glands which pour their liquors into them, they are surely highly worthy the attention of the medical philologist. I am well assured that numerous diseases may be cured by a course of cathartics well directed, of which their origin cannot be imputed to the derangement of any particular organ, but merely to a morbid action, or broken balance, of the nervous and sanguiferous systems. In such cases the curative process is not very obscure: but in order to satisfy or blind the inquisitive, some medical men frequently speak of the bile adhering to the kidneys, the stomach, the intestines, nay even to the lungs:—surely such language deserves the severest reprehension. In the large intestines the re-

jected matters from the higher bowels undergo a complete alteration ; their bitter principle is gone ; they become feculent ; and acquire consistency, and peculiarity of colour and shape. I have before stated, that there are two kinds of air evolved in the alimentary tube, and, at page 269, have said, that it is carburetted hydrogen which accumulates in the lower intestines, especially the colon. As it is very often unaccompanied with any symptoms of morbid excitement or enervation of the stomach, it does not seem to be, like the flatus of the stomach, the consequence of indigestion. Nervous constitutions, more especially gouty ones, are extremely liable to a collection of this gas, and so far from its being a disease, they are never better than when it takes place and passes off freely, a convincing proof of which is, that they are usually much indisposed, with pain in the head and general nervous irritation when it is not produced. The occurrence of this flatus is, with them, a sure indication of approaching convalescence, under a variety of nervous diseases, especially gout, rheumatism, nervous fever, head-ach, &c. Some months ago, a young man applied to me for advice, whose principal complaints were severe pain in the loins and a considerable loss of flesh. The disease had received several names, as rheumatism, and various external applications had been used,—also gravel, and for this various remedies had been exhibited. The pain and emaciation of the body, however, increased ; the bowels were generally costive and the evacuations of a light brown colour, which symptoms and appearances might have induced some, particularly the supporters of the bilious doctrine, to believe that they proceeded from a paucity of bile. But I suspected that fæcification and the evolution of hydrogen gas were defective, accordingly I put him upon a regular course of tolerably active cathartic medicines, &c., of which he partook daily for about a fortnight, without much amendment ; but shortly after

this period his wife called and told me her husband was much better, and added, that for many weeks previous to his coming to me, his stools were without odour, but that they had now nearly acquired their natural colour and smell, and that as soon as the latter event had taken place, he found himself greatly relieved. From this time his advance to health and strength was rapid. Similar circumstances are of daily occurrence in practice, yet not one of those writers on hepatic or bilious complaints have noticed the evolution or secretion of this gas, in the human intestines, and at present its source, which in a practical view is of much importance, is involved in some obscurity. In the stomach, duodenum, or small intestines it is never discovered, but always more or less in the colon, where the fæces undergo a change. I have before observed, that the office of this portion of the intestinal tube is, most probably, to separate fæculent matter from the blood, because we find there is a very considerable secretion from its internal coat, which gives the contents the fæcal characters. The colour of the fæces depends at least as much on this part performing its office, as on the secretion of the liver, the dark or blackish colour of the fæces being derived from it, and certainly not from morbid bile, as is generally imagined. The carburetted hydrogen gas, may be the product of the formation of fæces ; but it is more likely, from the soothing effects which its free expulsion has on the nervous system, that it is either discharged from the nervous system, or from the blood into the colon. People who indulge in the free use of vinous and spiritous liquors, and especially in strong malt liquors, are very subject to this species of flatulence ; but from these this gas is evidently not immediately extricated, as it is never found in the stomach, duodenum, or small intestines. With this gas, the air from the lungs of inebriates is strongly impregnated. It is also, as well as carbon, contained in

venous blood, and as both pass off by the lungs, I might ask, is this gas, like the carbon, the product of calorification or that process in the body to maintain its natural heat? It is certain, that if the temperature of the body be kept up by immersion in water heated to the degree of ninety-eight or one hundred, (blood-heat), neither hydrogen nor carbonic acid will escape from the lungs, and if blood be taken from a vein it will have the semblance of that of an artery. Hence the production of carburetted hydrogen is not a malady, but a secretion necessary in some nervous or gouty subjects, to maintain the system healthy, or to quiet the brain and nerves. The practice which we should keep in view, in such habits, under particular circumstances, is rather to increase than arrest it, and most assuredly, when the system is irritable or feverish, to promote it. For this purpose various remedies are beneficial, but it may be advantageous to have a family recipe for pills which may do much good and cannot do mischief, and on this account I recommend the following to gouty, or what are termed bilious subjects, as they not only operate on the liver, (or as Dr. Currie, of London, and others would say, emulge the hepatic system), but promote the secretion of the colon, and all this too without being calomelised.

Take of Aloes, six drachms,

Mastich, two drachms.

Powder these ingredients separately, mix them well with a sufficient quantity of syrup of wormwood to make them into a mass, then form three grains into a pill.

Great care must be taken to prepare the aloes properly in a strong tincture of liquorice.

Take one or two of these pills every day before dinner is ended; but never take them on an empty stomach; they are designed to digest with your food; continue the use of them three months or longer. After this time you

should continue to take them occasionally, particularly when the bowels are confined, or the stomach disordered. Also on being attacked with the usual symptoms of an approaching paroxysm of gout, as oppression of the chest, slight cough, disordered stomach, head-ach, cramp in the legs, great tenderness of the feet, &c. An exciting lavement, as a solution of aloes, or Epsom salts, in thin gruel, is likewise very advantageous. Those, however, who are subject to this gas should, by abstemious regimen, and especially by avoiding an excess of vinous and spirituous liquors, render the secretion of the gas unnecessary. From all that has been said, we must again come to the conclusion, that chyliification is chiefly carried on in the duodenum, so another process (mutation) is performed in the colon, which acts in unison with the liver in separating from the blood foul matter; and that between the glandular and mucous secretions of the intestines, the rejected chylous matter, and the bile, arise the colour and other peculiarities of the excretions of the bowels. The liver, colon, and kidneys are therefore the only depurators in the animal economy. All these facts, however, would be of no consequence, if experience and observation had not proved, that a deviation from the healthy standard of any of these appearances of the matters evacuated, is ever accompanied with a derangement of the general health. I believe I may now, however, contend, without the fear of being contradicted on principles scientific and practical, that the foregoing theory and treatment which I have detailed, will not only stand the test of experience, but will be acknowledged by the faculty generally to be more rational and very far superior to the theories and treatment of the before mentioned writers on biliary derangements, &c. I regret that my *present* limits will not allow me to give a full and comparative exposition of their contradictory theories and treatment.

Moreover, chronic hepatitis (inflammation of the liver) is, in my opinion, not only very often imitated by, but very often mistaken for an affection of the duodenum or other parts of the alimentary canal. Where cases of morbid liver prove intractable, it is no uncommon excuse, particularly of physicians who have practised in hot climates, that the failure has been chiefly if not entirely occasioned by deferring the adoption of active measures too long. Sometimes, no doubt, this may be the case, yet it is frequently unavoidable, because in this country the signs of incipient disease of the liver are obscure in the extreme, and may be very easily confounded with the symptoms produced by disordered actions of various parts of the *primæ viæ*.—For instance, spirits oppressed, appetite impaired or capricious, thirst, tongue dry, complexion sallow, pain occasionally in the right hypochondrium, extending to the top of the shoulder, or a sense of weight or dull pain in the right side, augmented while lying on the left side, respiration difficult on quick motion, heart-burn, flatulency, sometimes painful griping after taking food, a very irregular condition of the bowels, the evacuations being sometimes scanty, and at other times very copious and acrid, and a gradual diminution of strength and flesh, are symptoms mentioned generally as characterising the early stages of chronic hepatitis, and which have all occurred, singly or conjunctly, in cases where the liver has continued perfectly sound. The same remark may undoubtedly be applied to two other signs enumerated by some other writers, viz., a pulse intermitting, and a fluttering sensation at the pit of the stomach. What has also frequently been considered as a pathognomic mark of diseased liver, is yellowness of the eyes. But a slight tinge of yellow is perceptible in affections of the duodenum and many chronic disorders of the digestive organs; and there are cases which have occurred, where on dissection the liver has been found to be much

diseased, though during the patient's life, there had not been the least yellowness of the eyes.

Let the various modifications of dyspepsia be attentively considered, and many cases will be seen where all the above symptoms are evidently occasioned by that disease. Chronic hepatitis, however, is still more nearly resembled by another affection, and which, though important, has not, in these days of system-making, been much regarded. At first the disease appears to consist of a diminished power of the duodenum, in so much that the food, in passing through it, does not undergo the customary healthy changes; but after remaining in this impaired state a certain time, it becomes so tender, as to occasion considerable pain not only by its being distended, but by its being pressed upon. This is the stage in which it is most liable to be mistaken for hepatitis, and the symptoms of both diseases resemble each other so nearly, that the diagnostic marks peculiar to each are distinguished with much difficulty. I consider the disease to depend upon the state of the duodenum, if there be no hardness or enlargement of the liver perceptible to the touch on pressure, and where, along with weariness, sallowness of the complexion, occasional nausea, appetite almost entirely gone, thirst, flatulence, state of bowels irregular, occasional palpitation of the heart, frequency or irregularity of the pulse, in the right side obtuse pain, extending to the top of the shoulder, increased by pressure, exercise, or lying on the left side, and sometimes becoming acute after taking food, if with wasting of flesh, there be a daily evacuation from the bowels far exceeding in the quantity of real fæces the aliment actually swallowed. When with the same symptoms, the urine is of a milky white appearance, I never have any doubt on the subject, because under such circumstances I have found invariably the duodenum affected, but never observed the urine of the same appearance in diseased liver. I have, how-

ever, known many cases in which that particular state of the urine did not attend on diseased duodenum. In some instances, the pain in the duodenum is characterised by its taking place generally about an hour after eating, by its differing from that occasioned from flatulence distending the stomach, and its not being relieved by the expulsion of wind by eructations. I am of opinion, that the nature of those alterations in the duodenum which occasion symptoms so closely imitating those of chronic hepatitis, arise from some impaired action of the minute vessels or glands on the internal surface of this viscus, which has been justly termed the second stomach, the consequence is the secretions requisite for the conversion of food become disordered, and an unusual stimulus is therefore formed, which either occasions chronic inflammation, or a degree of tenderness approximating to it. Individuals who have formerly resided in hot climates, and have suffered from affections of the liver, are particularly subject to this complaint of the duodenum; deranged action of the nerves of the stomach or of the duodenum by disturbing the brain, excite morbid irritation in a remote branch or nerve that is not healthy; and from the sympathy existing between every part concerned in digestion, we may reasonably suppose that if this disease be neglected in such constitutions, the liver may ultimately suffer. For the removal of that disposition to diseases of the liver, which Europeans who have inhabited warm climates are so apt to experience, nature has provided a most efficacious remedy, viz., the muriate of lime, which constitutes the active ingredient of almost every natural mineral water. Thus Cheltenham water has long been known to afford great relief to those invalids who return from India and the West Indies, and that the muriate of lime is its principal active ingredient there can be no doubt. It is true that in many instances the relief experienced from that mineral water proves merely tem-

porary. This, however, probably depends on some mismanagement in its use. For instance, it is not, in many cases, continued for a sufficient length of time; in some, proper attention is not given to the clothing, diet, air, exercise, &c., which, in impaired and shattered constitutions, are so very essential to the restoration of health; and in others the laxative effect of the Cheltenham water, after a week or two, proves exhausting. It should be made known to invalids, that some medicines produce very different, and even opposite effects, according to the quantity exhibited as a dose. In particular complaints of the bowels, for instance, twenty grains of ipecacuanha taken at once, induce full vomiting; but if the same twenty grains be divided into forty pills, and one of them be administered every half-hour, till the whole be taken, neither nausea nor sickness ensue, while the irritation of the bowels is in general allayed. An equal or still more striking illustration of the same fact is afforded by the muriate of lime.—Half a drachm of the ordinary solution of that salt, mixed with eight or ten ounces of water, and sweetened agreeably, may be taken twice daily, for a great length of time, without any immediately sensible operation being produced, and in most cases, with the general health evidently improved. But if three or four drachms of the same solution be taken as a dose, a most violent and exhausting diarrhœa is generally excited; and if the same dose be persevered in for even a few days, emaciation the most alarming speedily ensues. If, however, in lieu of the Cheltenham water, the muriate of lime be administered in doses proportionate to the patient's constitution, and be regularly persevered in, there can be no risk of disappointment; because it may be continued for many months, not only with perfect safety, but also without any inconvenience or restriction whatever, and it may be, according to the circumstances of the individual cases, conjoined with diluents, sometimes

with neutral salts, and sometimes with preparations of antimony or iron. But as there is no sensible operation produced by this medicine, unless when exhibited in disproportionate doses, and as it acts slowly and imperceptibly, so that its use is not followed by a rapid amendment, we need not be surprised that the impatience and the prejudices which so commonly attend a broken state of health, make invalids apt to become tired of it. It is, however, as Professor Carlisle observes, “ a wise maxim
 “ in physic, that diseases which are long in their advance-
 “ ment, are generally only to be cured by long continued
 “ curative attentions. Common sense points out the
 “ fallacy of expecting to eradicate old established errors
 “ of the body, by any single or sudden remedy.”

Different means are necessary for the cure of this disease of the duodenum, according to its progress. In slight and recent cases, repeated doses of rhubarb, with magnesia or other aperients, and a course of the white oxyde of bismuth, together with mild food, usually prove sufficient. But in more violent degrees, or when inflammatory excitement actually exists, the application of leeches to the epigastric region will not only be necessary to begin with, but often venesection also, after which one or more antimonial emetics must be ordered, and nauseating doses of the same, with aperients occasionally, should be continued for a length of time, the patient all the while being kept upon the lowest possible diet, with respect to the quantity and the quality of the food. After the urgent symptoms have subsided, the same mode of diet as that directed for indigestion or complaints of the stomach, should be adopted, and the white oxyde of bismuth, united with some aromatic, is to be prescribed. Dr. Yeates has promulgated an account of the beneficial effects of the white oxyde of bismuth, in a severe affection of the stomach of a gentleman far advanced in years. The case, and the Doctor's introductory remarks are given as nearly in his own words as possible to be understood by

non-medical readers. The attention of physicians have been particularly called to the good effects of this remedy, in certain painful conditions of the stomach, by Dr. Marcet, Dr. Bardsley, and others, and Dr. Yeates observes, “in reviewing the cases which have been presented to the public, I do not find the age of any patient to exceed fifty-five years; and as the patient, whose case I am about to relate, had for a long period of years been afflicted with distressing pains of the stomach, was past seventy when the treatment was first commenced, and when the symptoms were so violent as justly to excite a suspicion of much organic mischief about the stomach, I am induced to believe that a detail of it will add considerably to the good opinion entertained of the bismuth, and will contribute to diffuse still wider the benefits to be derived from an exhibition of this valuable medicine.—January 21, 1816, P—— C——, Esq., aged 71, complained, at the beginning of winter, of pain about the pit of the stomach, attended with much eructation of wind and costiveness. The appetite is rather deficient, but it varies; it is not accompanied by any morbid thirst; the tongue is foul; pulse full, slow, and soft; a wasting of the flesh has taken place: the urine is of the natural colour and quantity; there is nothing remarkable in the colour of the fæces. No uneasiness is complained of by pressure on the epigastric region. The pain troublesome at various times during the day, but is most distressing between ten and eleven at night, when it comes on with intolerable violence, and to such an extent, as to cause vomiting, when the matters thrown up are very liquid, great in quantity and extremely acid; some relief from pain is then obtained. Sometimes the pain returns in the night, so as to destroy rest. It occasionally shoots to the back, and produces a slight dyspnœa for a short time. The pain is not brought on immedi-

“ately upon taking food, but he describes it as occurring
 “about three hours after meals, by a kind of fermentation,
 “and a sensation of weight, as if the food had never
 “passed from the stomach. In the winter of 1814,
 “these distressing symptoms continued so long, and
 “with such violence, as greatly to injure his general
 “health, and to produce a considerable degree of e-
 “maciation, with a dry, brown tongue, and a slow weak
 “intermitting pulse. At that time he was restored,
 “after some mercurial medicines, by the compound mix-
 “ture of iron; but he was never long free from pain,
 “although it was much mitigated. At the beginning of
 “the ensuing winter, it returned with considerable vio-
 “lence, when the mixture of iron was again resorted to
 “with some temporary relief. Bark and various other
 “remedies have been given without benefit; the most
 “immediate relief has always been obtained by large
 “doses of magnesia and chalk in cinnamon water. The
 “dose of these absorbents were taken in such quan-
 “tities, as to produce an uniform white appearance in the
 “fæculent discharge. Reflecting on the cases which
 “had been published, and in which the white oxyde of
 “bismuth is so strongly recommended, I determined to
 “have recourse to it. Accordingly, about six weeks ago,
 “he began with five grains three times a day, mixed
 “with some tragacanth powder. Relief being obtained,
 “the dose was increased to eight, then ten, and lastly
 “to twelve grains, thrice a day, with such decidedly good
 “effects, that P—— C—— called upon me yesterday,
 “and said he had been free from pain and uneasiness for
 “some time, although he had occasionally, by way of
 “experiment, indulged with impunity in such articles of
 “food as had formerly very much disagreed; and that
 “he had omitted taking the powders for four days, and
 “no pain had returned. The bowels had been generally
 “regular, but it was sometimes necessary to take a few

“ grains of the compound extract of colocynth. Thus
 “ this venerable gentleman has for the last three years,
 “ enjoyed considerable comfort from the use of this me-
 “ dicine ; and this relief from pain he would, most pro-
 “ bably, not have experienced, but for the bismuth ; for,
 “ during three years which have elapsed since he first
 “ took it, the pain has at times returned, but has been
 “ uniformly removed, by having recourse to this mineral.
 “ Having experienced its good effects in this way, he
 “ has always had a packet of the white oxyde by him ;
 “ and, when necessary, has taken a small quantity in
 “ a tea-spoon, without weighing it, every evening for
 “ several nights. The probability is, that some organic
 “ disease exists about the stomach, most likely towards
 “ its pyloric orifice, the progress of which has been ma-
 “ terially impeded, with always a great diminution, and
 “ occasionally a total loss of pain for a considerable space
 “ of time. His comforts have, therefore, been greatly
 “ increased, by the use of the bismuth. The long con-
 “ tinued use of this medicine is productive of no bad
 “ consequences.” The *oxyde* of bismuth, being com-
 monly used as a cosmetic, is often mixed with white
 lead, care should therefore be taken to have it quite
 pure.

When mercury has been prescribed in that disorder of
 the duodenum, imitating chronic hepatitis, on the suppo-
 sition that the liver was diseased, fatal event has some-
 times occurred with uncommon celerity ; vomiting of
 matter of a coffee colour, with excruciating pain in the
 region of the stomach, succeeded by delirium, suddenly
 supervening. But in by far the greater number of cases,
 the symptoms are only so much aggravated as to render
 it necessary to suspend the course of mercury, and to em-
 ploy palliative means.

Mr. Anthony Carlisle, professor of surgery and anatomy
 to the Royal College of Surgeons, of London, &c., very

justly condemns the present fashion of attributing all diseases to a disordered state of the liver, and he observes, “ I cannot adopt the irrational opinion of those practitioners who attribute *all* human maladies to a *single* source ; or who pretend to remove *all* distinctions by one remedy. The annals of medicine have been too often disgraced by this and similar theories, although common sense, logic, and science, have alike and at all times discarded them.” But the professor, speaking of the blue pill, says, “ it seems to have no intrinsic purgative quality, but to act indirectly by exciting the flow of that *natural intestinal stimulus* the bile. The profession are indebted to Mr. Abernethy for the present general use of this valuable medicine.” Now, I have before stated, as my opinion, that the use of the liver is to assist in depurating the blood, and that the bile is an excrementitious matter ; and therefore I disagree with these two gentlemen when they assert that the bile is the natural stimulus of the intestines. I am well aware of the danger of deviating in sentiment with such able anatomists and physiologists, and men who deservedly stand so high in the estimation of both the profession and the public at large, yet I must beg leave to offer my own opinion, and in support of it, I avail myself of Mr. Carlisle’s long continued professional experience which directed him to seek for incipient disorders in the state of the stomach and its dependencies, and the condition of the blood and its vessels. Over distension of the vessels, contamination of the blood, impaired digestion and consequent crudities mingling with the materials of the blood, obstructed bowels, and all the dangers which result from impediments to that source of keeping the body pure and wholesome, are to be, the professor says, reckoned the leading causes of many diseases. Now, under such circumstances, is it not more likely that we should succeed most rationally and effectually in our curative means, by

directing them, in the manner I have before pointed out, to the impaired digestion of the stomach, to the promoting chylification in the duodenum, to the removing obstructed bowels, and to the promoting depuration, than to the attributing all these wholesome effects to the stimulus of the bile? Mercurial preparations having a tendency to excite diarrhœa, it appears very natural to employ them for the cure of habitual constipation; and it is unquestionable, that on many occasions a course of the blue pill, with a due regulation of the diet, has restored the healthy action of the bowels. This may certainly be readily conceded, without admitting in its full extent the accuracy of Mr. Carlisle's eulogium upon the powers (or rather limited powers) of that preparation of mercury, viz., that "it seems to have no intrinsic purgative quality, but to act indirectly by exciting the flow of that natural intestinal stimulus the bile." which secretion I have described as excrementitious. Mr. Abernethy has considered the appearance, and particularly the colour of the evacuations from the bowels, to afford the best evidence of the true condition of the liver. But my experience has led me to a different conclusion; and indeed I have been always inclined to believe that many of the cases which have been detailed, as instances of affections of the liver, were, in fact, disorders of some portion of the intestinal canal. This supposition is founded, partly on the rapidity with which Mr. Abernethy's cases yielded, and partly on the nature of the means employed, viz., frequent doses of rhubarb, with a very small portion of the blue pill, for rhubarb appears to exert a special influence on the stomach and duodenum, at the same time that such a composition acts upon the lower bowels. A Doctor John Thomas, of Cheltenham, "many years resident physician at Thoulouse in France, has been enabled to improve the English practice (on bilious and nervous diseases) by combining with it some useful methods of

“cure employed on the continent,” two of which are to add to the blue pill system, enemas and warm bath. The Doctor not only thinks the Hamiltonian and Abernethian systems do not differ, but he is such a warm admirer of them, that in his opinion Dr. Hamilton and Mr. Abernethy have treated on bilious complaints, &c., in such a superior manner, “that nothing but the *hope* of being “able to *glean* a few *scattered* ideas, not taken up, over-looked, or perhaps not thought of by those two able “physiologists, could have tempted him to explore a “ground already so well known.” What, learned Doctor, the ground already so well explored and known? Look, then, at page 281, and inform us what occasion there could have been either for your own book, or those there mentioned? We are favoured with seven new publications, the contents of which, according to Dr. J. Thomas, can consist of merely a few scattered gleanings. Whatever apparent similarity, there may be between the systems of Dr. Hamilton and Mr. Abernethy, the practical consequences are very opposite, and unless Dr. Thomas and others make the proper distinctions, they will speedily send many of their patients, at the “celebrated asylum for invalids,” to the grave. The Abernethian system recommends an aperient medicine chiefly to obviate constipation, not to purge, and it is not only capable of curing very formidable organic or structural diseases, but is at the same time incapable of doing harm even in emaciated and broken constitutions, whereas the Hamiltonian system, in such cases, would be dangerous in the extreme; as, for example, an indiscriminate use of purgatives, which Dr. Hamilton in some degree sanctions, has in many a patient with diseased intestines, and others of leucophlegmatic habits, been productive of the most serious mischief. Under the head of cathartics I have pointed out the cases for which Dr. Hamilton’s plan is particularly adapted.

Dr. Baron, of Gloucester, in "An Enquiry illustrating the nature of Tuberculated Accretions of Serous Membranes," &c. informs us, that the question respecting the origin of hydatids, was a subject of interesting discussion soon after the discovery of the absorbent system. Of late years, he says, little has been said on the subject in this country; and there are many distinguished and experienced men who do not seem to be aware, that a very great variety of important changes of structure take their rise from hydatids, whatever may have been the source whence they themselves originated. Hydatids, says the Doctor, have been found connected with almost every texture of the body. They vary much in size, from a body smaller than the head of a pin, to a magnitude which seems only to be limited by the resistance offered by the surrounding parts. Sometimes a cluster of hydatids receive their nutrition from a small pedicle, or stalk, like a bunch of grapes from a branch of the tree. At other times, he says, they are imbedded in the body of the viscera, or are spread over the surface of membranes, and diffused through the cellular substance and muscular textures. Occasionally they grow to a very great magnitude, without undergoing any change of structure; but this is a rare occurrence, for sooner or later a conversion takes place, and the limpid contents, as well as the containing parts are changed to substances of very different characters, and occasion tumours and tubercles, and other disorganizations, which it has of late been customary to ascribe to causes of another kind. He further says that this enquiry has hitherto been confined to the symptoms and consequences of tubercles in the peritonæum; but the dissections have proved the existence of the disease, not in other membranes of the same class, but in other textures. They have been found in the lungs and in the pleura; and it will afterwards appear that they may exist in almost every texture of the body. Their origin, he goes on to

tell us, must therefore be connected with some one of those elementary parts of our frame, which are diffused through the body, and enter into the composition of every organ. It is not known how the changes in hydatids are affected; but to these *changes*, certain tubercles owe their existence, and on the *size* and *relative position* and *structure* of the *tubercles which* are so formed, depend the *characters* of *many* of the most *formidable disorganizations* to which the human body is exposed. Hydatids, he observes, may be diffused through the whole of a viscus, leaving nothing of its original texture; or they may occupy any proportion of it, or extend to the contiguous parts, and involve them in the same form of disease.

Doctors Mills, Currie, Johnson, Arye, Philip, Hare, Jackson, Jordan, Solomon, Thomas, &c. must see, after all, that their intelligent minds are completely shrouded in the darkness of ignorance on the most important parts of physiology and pathology, and when they talk of hepatic systems, chylopoietic systems, derangements of the liver, bilious complaints, &c., they must mean, if we are to credit Dr. Baron, hydatids,—tuberculated accretions,—which are every day destroying thousands of the human race; and that all their liver and bilious projects, &c., are mere flights of fancy. They should look for the origin of all diseases to hydatids, and to hydatids only,—the *lungs* they will find tuberculous,—in the pelvis of the *kidney*, in the *liver*, &c. they will find many hydatids and tubercles,—to the *heart*, to the *aorta*, &c., they will also find clusters of hydatids hanging like bunches of grapes from the branches of a tree,—and, I would then merely ask, whether Dr. Baron has not pointed out a boundless field for the progress of intellect,—for the combined exertion of all their zeal,—the operations of all their genius,—the realization of all their projects, for the felicity,—the improvement,—the elevation of their fellow-creatures. There are few things so great that man cannot attempt

their accomplishment. There are many seeming impossibilities which he possesses power to overcome. Science has already achieved triumphs, which remain as so many standing miracles effected by human agency. If then the before mentioned Doctors are desirous of accompanying Dr. Baron, step by step, through *his* favourite investigation, the diffusion of their mighty and effulgent blaze of combined knowledge, would quickly illumine the darkest recesses of hydatidal obscurity.

In fact, inflammation and infraction of the liver are of very frequent occurrence in hot climates, both as idiopathic and symptomatic affections; following nearly every disease of the system. But in Great Britain, the alteration of structure in the liver, which terminates ultimately in suppuration or scirrhusity, arises merely from mismanaged intermittents, from scrofula, or from the abuse of intoxicating liquors. The enlargement of that part is, however, occasioned by other causes, that is, hydatids, tubercles, and what are termed tubera. But it appears to me that the hydatid and tubercle are of opposite natures, and that the one does not originate from the other. I wish, therefore, to ask Dr. Baron, if the coat of the hydatid is not different both in colour and texture to that of the tubercle, and whether the latter be not, (unlike the former), condensed cellular substance? These facts fully elucidate what has long been acknowledged by all candid practitioners, that no mode of practice can be successful, in many cases of enlarged or indurated liver. Where the induration has followed a protracted intermittent, there is much better chance of recovery, than where it is the effect of scrofula, or the abuse of intoxicating liquors; for in these latter cases there is frequently some complication, arising chiefly either from diseased alterations in the stomach and bowels, or from some other parts concerned in digestion.

In this country, the ordinary mode of exhibiting mer-

cury for the cure of chronic inflammation of the lungs sometimes hurries on the disease, or, by impairing the constitution, lays the foundation for paralytic affections, it may therefore be truly affirmed, that it frequently shortens life. The great end of medicine consists in promptly and effectually applying its healing powers to those disorders which are curable, and in quieting those which are incurable. Dr. Pemberton, in his treatise of the viscera, has endeavoured to give an accurate view of this subject—and some of his remarks, which are valuable, have been too frequently disregarded. “Where mercury is exhibited,” he observes, “where the structure of the viscus is not totally destroyed, although another source of irritation may be introduced into the system by this new stimulus, yet this disadvantage will be more than caunterbalanced by the benefit received in the removal of that disorder, under the influence of which the constitution was before labouring from the excitement of the deranged viscus. If, on the contrary, mercury is used where the structure of a viscus is totally destroyed, another source of disturbance is added to the system, without the diminution of any existing evil; so that, in fact, we subject the constitution to two sources of destruction, and thus the dissolution of the patient is rather accelerated than retarded.” In particular stages of congestion of the liver, and of other viscera, the inflammatory diathesis excited by the use of mercury, instead of removing the congestion, inceases the disordered changes which had begun. Therefore, instead of ordering mercurial ointment to be rubbed upon the side, calomel or the blue pill to be taken internally, in order to affect the mouth, and keep up the soreness for many weeks, the most prudent way would be to combine the mercurials with the antimonial preparations, with occasional doses of neutral salts in a very dilute form, so as to increase the secretion from the skin and also from the

kidneys, without the least affecting the mouth or irritating the bowels. With these medicines, I would advise a diet consisting of weak animal mucilages, of the lightest farinaceous matter, with warm clothing, and properly regulated exercise, but strict confinement within doors will in some cases be necessary. I would also recommend the frequent use of the warm bath.

Respecting the method of treating tuberculated accretions of the peritonæum, Dr. Baron observes, “ whatever
 “ benefit may be expected from medicine, must be ob-
 “ tained in the earliest stages of the disorder. Bleeding,
 “ both general and topical, and blistering, I have employ-
 “ ed freely ; but the relief obtained was very transient—
 “ not more than arose from the temporary suspension of
 “ those pains which occur from accessions of inflamma-
 “ tion, during the progress of the disease. That progress
 “ is not dependant altogether upon the sanguiferous sys-
 “ tem ; consequently remedies which act merely upon
 “ that system cannot succeed. Without free alvine eva-
 “ cuations, the distress becomes quite insupportable.
 “ But when great quantities of purgative medicines are
 “ given, the patient is frequently made very uncomforta-
 “ ble by their exciting attacks of nausea and vomiting,
 “ which the disease itself has a strong enough tendency
 “ to induce. When the vomiting is very frequent, it is
 “ generally preceded and accompanied by the ‘ broiling
 “ heat’ at the stomach. This most distressing symptom
 “ it is very difficult to mitigate. I have at times found
 “ benefit from the solutions of potass and soda: at other
 “ times I think I have seen advantage from the employ-
 “ ment of the mineral acids; and the gastrodynia, I think,
 “ I have relieved by the oxyde of bismuth. The purga-
 “ tive medicines best suited to the patient, must be found
 “ out by particular observation. Mercurial preparations
 “ now and then do good ; but I do not imagine that they
 “ afford any relief but what proceeds from their evacuant

“ properties. Mercury was used in this disease, so as to
 “ produce its full constitutional effects ; but certainly the
 “ complaint was not thereby abated : on the contrary, it
 “ was rather augmented.” In one case of physconia,
 connected apparently with a disease of the ovary, the
 Doctor found the swelling altogether removed by a solu-
 tion of elaterium. It induced great and long continued
 nausea and vomiting. In another case, he thought there
 was decided benefit obtained by the use of the muriate of
 lime. The Doctor mentions “ some other facts, shewing
 “ the disappearance of morbid growths under the influ-
 “ ence of nausea, whether caused by medicine or other
 “ means.” Indeed it would appear, that for the removal
 of morbid growths in various situations the most success-
 ful treatment mainly proceeded from the effects of long
 continued nausea in exciting the action of the lymphatics,
 and he mentions a case, communicated to him by Dr.
 Jenner, of a gentleman whose lymphatic system was in a
 state of great derangement, and who was affected with
 scirrhus tumours, which were absorbed by the action of
sea-sickness. Dr. Baron also relates a case of a lady, forty
 years of age, of a strumous habit, and whose breast,
 three-fourths of which, assumed the characteristic
 marks of complete scirrhusity. She “ took emetic tar-
 “ tar in nauseating doses repeatedly during the day,
 “ so as to be not only sensibly, but distressingly felt ;
 “ however, rarely, and never by design, so as to excite
 “ vomiting. She grew thin and somewhat weak ; but as
 “ it was manifest an amendment had taken place in the
 “ state of the breast, she persevered, till the absorbents
 “ had entirely removed the disease.” To these means
 the Doctor recommends the alimentary canal, &c., to be
 kept in a healthy state.

The circumstances which I have stated in the foregoing
 pages, regarding the mischievous effects of mercury in
 some affections of the intestinal canal, as well as upon

particular constitutions, and the impossibility of always distinguishing those persons to whom that mineral in every shape, is liable to prove injurious, it is evident that no practitioner can calculate, with certainty, on the safe operation of mercurial purgatives, unless in particular cases where the experiment has been already tried. Again, where habitual torpor of the bowels, arises from some inordinate state of the mucous and other secretions of the intestinal tube, and not, as erroneously supposed by most physicians, and others, to a deficiency of bile, certain it is that there are numerous medicines which can remedy those defects with much more safety than mercury. For instance, preparations of antimony and of rhubarb both will stimulate the hepatic system, and augment the secretions from the stomach and intestines, gamboge and magnesia, aloes and ipecacuanha, and innumerable neutral salts, will occasion the latter effect; by a suitable combination therefore of different medicines, all the advantages of mercurial purgatives may often be acquired, without incurring any of the dangers. Indeed, whether it be necessary to cause the flow of bile, or to increase the secretion of the fluids, supplied by the stomach and intestines, or to rouse the peristaltic action of these latter, medicines may be selected which shall expressly produce those effects, without the least hurting the general habit. When on the contrary, there can be no preparation of mercury administered without the risk of some consequences following, that could neither be intended nor expected. I am well aware that there are many cases, in which the blue pill or calomel should be employed for the purpose of opening the bowels, but I have strong objections, more especially in delicate or in emaciated constitutions, to the indiscriminate and daily reiterated use of such powerful and hazardous means. Unquestionably the general rule should be to avoid pres-

cribing any mercurial preparation as a purgative, when means more safe can be depended on.

I shall now return to page 259 where it is stated that mercury is the universal family specific of the Asiatic-Europeans, which practice has led to an indiscriminate use of this medicine in liver complaints. This remark applies particularly to those Anglo-Asiatics or returned practitioners; the former residents in hot climates, who make no distinction between the different situations of patients in the opposite region to where they now practice. We should regard mercury only as an auxiliary means, necessary in particular morbid conditions of the hepatic functions. Should the increased action of the organ be the effect of high inflammation, which may gorge its vessels, and impede its secretion, bleeding is the most proper way not only to restore its energy, but to allow the bile to be separated and carried off. If mercury be now used, the judicious practitioner will prescribe it in the form of calomel, to act as an evacuant remedy, and assist the discharge of the secretion when separated, and accumulated in the hepatic ducts. If we examine into the sentiments and opinions of a former age, we shall find, that the system of Hoffman did not differ materially from the preceding. It was certainly expressed in a different phraseology; but the danger of hepatic congestions and the absolute necessity of an attention to the condition of the liver, was powerfully pointed out by this experienced physician, and particularly drastic medicines were expressed, as specific eliminators of this organ. I may here, however, notice that the sentiments of Boerhaave were similar to those of Hoffman, and by a new and more ingenious mode of reasoning the practice should be brought back to what it stood at in their days; the mischievous effects of what they termed congestion of the liver, cannot be too clearly pointed out: and that the free purgation of this organ is often of the most material

consequence to the general health of the system. This is the only effectual way to give a blow to the anti-spasmodic and stimulant theories of medicine, and to bring back the practice to its more natural and successful application of depletion, and reducing rather than exciting, and overstretching the powers of life. This plan is assuredly more agreeable to reason and common sense; and though the judgment of the profession may for a time be led away, by the splendid reveries of a few and of their followers, yet these must ultimately give way to the return of cool and deliberate practical observation, which will ever detect their fallacy, and consign them to deserved oblivion. But an excessive secretion of bile may be the consequence of morbid or inflammatory excitement of the liver, as in cholera morbus. In this case, the experienced physician would follow the practice of Sydenham and Cullen, and recommend warm water to dilute the bile, which is morbidly acrid, and prevent spasms; he would also recommend an opiate, to allay excessive irritation, and thereby prevent inflammation. Should this latter symptom supervene, he would resort to the detraction of blood. There is, however, another opposite state, where, instead of high inflammation, the organ possesses an atony, and sub-irritation, or defective excitement of its vessels, having the same ascendancy as the former condition, in suspending its secretory powers, and in loading its vascular congeries. Though local bleeding may here be used, it can only be for a temporary purpose, and as to general bleeding it will only be necessary where the sanguiferous system is overloaded, or for the purpose of rousing and promoting sanguification. The cure, therefore, greatly depends on giving increase of stimulus, in order to enable the vessels to get rid of the bilious matter, and occasion it to pass into its natural vortex, to be collected and discharged. No doubt mercury is here superior to any other stimulant that can be employed; it

should, however, be prescribed in a form not immediately to pass off, as in the former state, but in the blue pill, or any other mild preparation, which may exert a more permanent and general excitement of the organ. We ought not, however, to trust to the mineral alone: it should be united with other remedies in order to aid its operation, and the liver once acting powerfully, and the secretion accumulating by these means; we may then, if necessary, and not before, have recourse to brisk cathartics for its discharge from the alimentary canal. M. Le Beaume says, “that the whole *Materia Medica* may be “searched in vain to find such a panacea as the Galvanic “influence in torpor of the stomach, liver, and bowels. “If other errors in medical practice can be said to have “slain their thousands, *calomel has slain its tens of thou-* “*sands*. If then the pernicious and destructive use of “mercurial preparations, can be suspended by the genial “administration, of this powerful stimulus, what devastation of constitutional vigour, might not be prevented? “What disease, suffering, and wretchedness might not “mankind escape? This great desideratum, I feel confident in asserting, has been obtained; for I have had “the sincere satisfaction to find by experience, that in a “variety of cases in which mercury had been formerly too “often employed in vain, the Galvanic treatment has “proved completely safe and successful.” M. Le Beaume has published many cases of his success, and Galvanism is certainly to be considered a valuable remedy.

But to return to typhus and other fevers of this country accompanied with local inflammation, occasioning congestion of the viscera, as the liver, lungs, spleen, mucous membrane of the trachea, &c. Dr. Armstrong says, that “where mercury has to encounter a highly febrile “action, the system receives no shock from its free administration, as its main force is spent on the reduction

“ of that excitement.” However much I may admire the Doctor’s writings generally, I cannot wholly accede to the above doctrine, and I apprehend it has led many into the mistake of administering mercury when febrile action runs too high. He also says, that “ the lancet is the right arm of medicine, and calomel the left ;” but the use of both should terminate, in every case, with the stage of excitement.

To proceed on scientific principles, however, we ought to adopt a treatment with a view of rendering the disease local, by unloading the system of blood-vessels, either by well-timed general or topical bleedings, or both ; emptying the intestinal canal, by active cathartics ; and producing a conducting surface, either by means of tepid water, or by the exhibition of a saline diaphoretic. Having thus localized the disorder, or converted an inflammatory disease into a mere irritative one, or rather active inflammatory into mere irritative circulation, the skin having become soft, and the increase of temperature and other symptoms inconsiderable, we ought then to have recourse to a NARCOTIC, which, in this state of the system, admirably subdues general irritation or local pain, either by restoring the nerves concerned in their production, to a condition of tranquility ; by acting on them in particular as sedatives ; or by rendering the sensorium torpid, and thus simply obviating the occurrence of sentient perception of the morbid state of the injured nerves. But the last mentioned effect will still have its use ; because the perception of injury by the sensorium keeps the whole system restless, and, therefore, must hurt a part if it hurt the whole. When opium, however, is administered for the express purpose of lessening irritation, the first dose ought to be tolerably large, I generally give two grains, sometimes three ; and the subsequent ones of course much smaller. After the first large dose, small and repeated doses of opium will frequently succeed where large

ones fail. But it must be constantly remembered that in all fevers, where secondary symptoms of irritation, which sometimes come on when local inflammation has been subdued, occur ; or when the skin is parched, and the temperature rises considerably, we must either defer the opiate till the symptoms begin to remit, and especially till the hot parched skin is in some degree relaxed, by the use of the warm bath and active purgatives, or combine it with antimonials. If we cannot, however, succeed in inducing a degree of relaxation in the skin, and obviate the opium augmenting the heat, it must be deferred till the more advanced period of the fever or decline of the stage of excitement. But should there be passive congestion of blood, or should we suspect an effusion of lymph to have taken place, in such states of the malady the administration of opium and calomel might be attended with the most happy results. The use of the latter may in such cases be thrown in so as to speedily affect the gums, indeed saturating the body at this time with mercury, and exciting the glandular and absorbent systems, thereby the more readily bringing about the healthy secretions of organs and relieving the part, is the remedy of chief dependence. In these cases, the best general plan will be to administer submuriate of mercury, so as to insure its purgative and specific effects at the same time ; giving it in the quantity of ten, or even twenty grains in the day, followed by some other active cathartic, that plentiful evacuations might be procured before bedtime ; and during the night exhibiting it in divided doses, combined with opium, by way of accelerating its more complete absorption, and soothing nervous irritation. In such inflammatory complaints, after the proper abstractions of blood, &c. in the manner described, no medicine possesses greater power of equalizing the circulation, of restoring the balance between the vascular and nervous systems, and thereby relieving the viscera from en-

gorgement, than the practice of giving submuriate of mercury and opium ; but in order that this compound may produce its full effects, it must be administered in the liberal manner here recommended. I have often found a combination of the compound powder of ipecacuanha with calomel an excellent opiate and deobstruent in this stage of fever.

It is not generally known, and therefore deserves to be noticed, that nauseating medicines administered with or during the use of mercury, promote its absorption. The powder or wine of antimony, taken during the use of mercury, hastens salivation, possibly by increasing the action of the absorbent vessels of the stomach. The effects of mercury administered at short intervals during fever, ought to be carefully watched, because on some constitutions, as before observed, half a grain administered at intervals will have as great an effect in producing salivation, as six or even ten times the quantity will in others.

But while I wish to guard practitioners from administering mercury too early, which is, I believe, too generally the practice, in acute diseases, or where the system is much excited, I would at the same time avoid delaying it too long, in reducing the powers of the system, by bleedings, purgatives, clysters, fomentations, blisters, &c., that even the powerful effects of calomel and opium is lost and proves unsuccessful.

It must however, be constantly kept in mind, that opium should not be administered in inflammations of the viscera, until a proper impression has been made by free depletions ; except indeed where the pain is excessive, and in that case it may be employed with advantage, together with venesection. It will be found, in some inflammatory affections of the abdomen, accompanied with spasm of the intestines, or uncommon irritation, impossible to move the bowels, without the previous exhibition of opium. In such cases, from one hundred to one hundred and

twenty drops of the tincture generally does very well, made with two ounces of mucilage into an enema, which quantity of the latter should not be exceeded, else it will be too large to remain long enough to produce a due effect.

It is, however, far from being generally known, that to make calomel efficacious, it must be combined with opium, or other narcotic; and this is more particularly necessary in inflammation of the intestines. But the prudent chiro-physician, in order to insure their sedative and deobstruent effects on the affected organ, would at the same time produce a determination of nervous fluid to another part of the body by a BLISTER. To what extent, and in what manner, blisters prove useful in inflammatory disease, are propositions which have been often agitated. At page 48, in enumerating the various remedies employed in the cure of internal inflammations, &c., I stated that blisters and other irritants to be beneficial, their application to the skin must be *well-timed*; for they never prove efficacious until the system of blood-vessels have been previously sufficiently unloaded by bleeding, which circumstance is either too little known or too little regarded, and much serious mischief is frequently the consequence by aggravating and increasing the fever or temperature of the body. This effect, particularly in children, and during the first stage of pulmonary consumption, I have frequently witnessed. When the disease, however, is by proper depletions rendered more an irritative, than an inflammatory, the inflammation produced on the skin by a blister, or a powerful irritant, such as the strong water of ammonia, always proves, on the principle of derivation, very beneficial. In subduing inflammatory diseases of children, blisters certainly are possessed of very decided power; and, it must, I think, be allowed, that when their indications are properly attended to, most commonly neither any local or general inconvenience is produced. That they have, however, in

many instances caused unpleasant symptoms it is equally important to be aware. That they are principally serviceable in the *last* stages of the complaint, and after the violence of the symptoms have been subdued by other and more appropriate means, is generally allowed. Some have therefore argued, that they are applied only when the disease itself is on the decline; and that they might, consequently, be, without injury to the patient, dispensed with. That this view of the question is, in many instances, perfectly correct, there can be little doubt; but it is inapplicable as a general rule, yet it surely illustrates the position which we should endeavour to enforce, that the indiscriminate employment of blisters in the diseases of children, upon the mere ground of the presence of inflammatory action, is very improper; and that their application is by no means on a par with the injunction of low diet, or an aperient, or a pediluvium; but that it should, in every case, be as maturely weighed as the propriety of phlebotomy, leeches, or cupping. The disagreeable effects that are likely to be experienced from blisters, is principally in feverish and inflammatory conditions of the system, where the skin is hot and dry. The best mode of preventing the bad effects of blisters in young children, may be thus briefly stated:— In the first place, they ought never to be applied when the symptoms demand the detraction of blood. Opening a vein in the arm or neck, or if that be impossible, the application of cupping-glasses or leeches should never be omitted, under the hope that their necessity can be superseded by the application of a blister. The *frequency* of *acute* inflammatory affections of infants has been long acknowledged, and should a blister, after all, be considered indispensable, as it will be found in numerous cases, the injurious effects may frequently be obviated by applying it of moderate size, and keeping it on for only a moderate space of time. This will vary in different children. The skin of an infant or

young child is so very irritable, that frequently the blistering plaister may be taken off at the end of two hours, it should never be allowed to remain on longer than three; on an adult six hours are sufficient. A degree of inflammation is, in that time, excited sufficient to produce a blister. The ulceration and disturbance of the nervous system, which succeed a blister, are produced by continuing the blistering plaister on the part some time after the cuticle has broken; the consequence of which is, that so much irritation is induced in the true skin, (cutis,) and in the cellular membrane under it, as to destroy their vitality, and a troublesome sloughing will follow, especially, as before mentioned, when the fever runs high, and the skin is hot and dry. Attention should likewise be paid to the healing of the blister, I would strongly urge the propriety of the practitioner's examining occasionally the state of the blistered surface in every case, and not trust the dressing of it to the nurse, as is too often practised. The occurrence of fatal convulsions certainly is not the consequence, as many physicians suppose, of excessive discharge, from the ulcerated surface, but of the irritative effects of the ulcer and surrounding inflammation on the nervous system. The discharge is never so copious as to occasion a dangerous degree of debility even in an infant, and in my opinion, it is more likely to prevent convulsions than to cause them. The dressing should consist of mild applications, as spermaceti ointment. As to the granulations, they generally give way to dry lint with an over dressing of the same ointment or of brown cerate, spread on lint. Should they be very exuberant, an astringent powder, as rhubarb, or cinchona, or oak bark, is preferable to lunar caustic or the blue stone, on account of not exciting pain, which, in a very nervous infant or child, might bring on convulsions. In some cases adhesive plaister answers better than any other application.

But in any case where the disease, either of the lungs or any viscus of the chest or abdomen, had become stricture, what effect could be expected from a sedative? It will for a time assuage pain, and render the disorder quiescent; but on these accounts could a change of stricture, or a removal of the morbid structure be hoped for? In every instance of organic disease, the chiro-physician first directs his attention to the condition of the habit of body. The disease being localized, our next object is to render it quiescent by a sedative, such as hemlock, &c. We are then to adopt a practice, with the view of removing the morbid *stricture*. Should it be internally situated, (not allowing of topical treatment) an endeavour must be made to bring the absorbent vessels into action, by the cautious exhibition of mercury, at the same time keeping a strict watch on the general health. Hence the mercury is not to be pushed so far as to create constitutional disturbance. By keeping up the action of the absorbent vessels, by the use of mercury, and by attending to the general health, diseased structure of even considerable extent may be removed. It is by this mild mercurial practice, together with sedatives and *various* other remedies, hereafter to be pointed out, that cancerous affections of the breasts, &c., as also SCROFULOUS glands, &c., may be cured. It sometimes happens, however, that notwithstanding all our care and precaution, the parts are so extremely irritable from peculiarity of constitution, or morbid irritability of the nervous system, that even the mildest operation of any mercurial medicine seems rather to aggravate than quiet and improve the state of the disease. Besides, it frequently happens, that after the virus of a certain disease is destroyed by the use of mercury, very troublesome ulcerations will continue if the constitution be tainted with scrofula. And again, in cases of inflammation of the eye arising from a constitutional malady like scrofula, we see our most celebrated oculists, such

as Sir William Adams, J. Stevenson, of London, &c., &c., fail in their attempts at cure. General bleeding, leeches, cupping, blistering, foxglove, tartarized antimony and mercury, employed separately or combined, can afford only temporary relief, and must ultimately prove ineffectual. It is, therefore, of the utmost importance that we should possess other and more effectual remedies for the cure of such cases, and these I shall fully and satisfactorily specify in a future volume. In fact, nearly all the disorders that assail humanity may be removed by regulating the system. Cachectic states of the body, and nine surgical cases out of ten, may be cured by constitutional treatment. Every body knows that the mortality from scrofula and consumption of the lungs is greater by far in Britain than in any other country of the same population. The hereditary tendency to these diseases, (their analogy of nature as well as constitutional and local connexion will hereafter be illustrated,) is so general in this island, that there are perhaps few families where they are not found. Some writers estimate the annual victims to pulmonary consumption at 20,000, others at 30,000, or 35,000; and some again as high as 40,000. The catalogue of mortality from pulmonic complaints is indeed frightful; but the important question is, how is this premature waste of the human race to be arrested or diminished? I think the answer, happily, is obvious: for our preventive means are much in our own power, and the disease undoubtedly is curable in its *incipient* and *early* stage. In short, I *assert*, that *even* SCROFULA, or the KING'S-EVIL, *can be cured*; and, of course, CONSUMPTION of the LUNGS in a very great number of instances PREVENTED!!

I shall now take my leave, at least for the present, of the mercurial treatment, observing only, that the foregoing scientific statements and regulated principles will be found to be built on sound observation, and a correct view of the laws of the animal economy; nay, if physi-

ans mistake the application of these clear and rational principles, which, in fact, speak for themselves, it must be for the want of judgment to apply them. I may, however, being in possession of the controversial opinions of nearly all the writers on this very important matter, at some future period elucidate them more fully, and oppose the solemn precepts of practical experience to the *jejune* and immature notions, or brilliant reveries, of fanciful hypotheses.

The use and abuse of STIMULANTS, such as wine, &c., in febrile affections, remain to be noticed ; and on this subject also there is as much diversity of opinion with medical men as on most others. Their use, however, forms a most important point of practice, and certainly to discover their indications and effects requires much minute, long, and careful observation ; yet to acquire an accurate mode in the application of such remedies, of varying their dose, and their degree of influence according to the different circumstances of the case, is not attended with that great obscurity and difficulty generally supposed, and therefore will be fully elucidated.

Hippocrates, the Greek physician, who flourished about four hundred years before the birth of Christ, and who is commonly styled the father of medicine, was an able chirurgéon as well as physician, divided diseases, from the *period* of their *duration*, into two kinds, termed *acute* and *chronic*. It is of momentous consequence that the practitioner be acquainted with the *stage* of the disease. He distinguished diseases into very acute, or those which have a crisis by the fourth day, or at least so remarkable a change as to enable the practitioner to judge whether the prognosis on the following day will be favourable or otherwise ; in those which are only acute on the seventh, eleventh, or fourteenth day ; the last of which is the longest period generally allowed by Hippocrates in the distempers that are strictly acute : though in some of

his writings, he extends it to the twentieth or twenty-first; nay, occasionally to the fortieth or sixtieth day. All diseases that exceed this last period are denominated chronic. These distinctions, however, are not precisely warranted by practice, because some diseases remain in an active state a longer period, and some chronic diseases exhibit symptoms of an acute nature.

As to *chronic* diseases, or those of long standing, there is generally more latitude to trace the various transformations which they assume; to pursue their Proteus through all their metamorphoses, and make ourselves acquainted with their masks and forms, so that the enemy, wherever he takes refuge, may be recognized, and combated with success. I wish therefore strongly to impress on my readers, that chronic diseases, if neglected, too often become acute and speedily destroy the patient. The usual symptoms of acute disease, in a person previously in health, are a quick pulse, heat of skin, thirst, furred tongue, pain in the loins or limbs, an incapacity of attention or exertion of mind, &c.; and certainly, if there be any point which I would more earnestly impress upon the mind of the public than another, it is,—that in the treatment of all *acute* disorders, it will be found the best general rule for the practitioner *to attack the leading symptoms as soon as they appear*. If the disease be *functional*, he cannot be too active in his measures to prevent its becoming *structural*. If *organic*, he cannot be too active in his measures to prevent *destruction*. But in order to prosperously guide our attempt to remove diseases, every symptom ought minutely to be attended to, and the method of cure must be directed by the indication taken from the assemblage of the whole. A close attention to all the animal functions is of much importance, for, when considered singly, they may communicate very little knowledge of a malady, or may even mislead us. How necessary is it then, that every one who enters the medical profession

should study the great *volume of nature* in all her shapes, and possess the power of discrimination; should be able to concentrate in his own mind the whole rays of each symptom and indication, and have the faculty of rapidly seizing and converting his materials of thought to present purpose, so as to penetrate at one glance, as it were, with almost instinctive sagacity, the idiosyncrasy or peculiarity of constitution of the patient; and to decide with sober judgment the very nice points that so frequently occur in practice, and act decisively for himself on every emergency; for it is a natural consequence, that time lost, or an error once made, cannot easily, if at all, be reparated or amended, even by the most skilful; and as some of the best remedies, amongst which is blood-letting, can be employed with advantage *only* at certain periods of disease, our precious moments, more especially when the life of a fellow-creature is at stake, ought not to be frittered away in ridiculous formalities and nonsensical professional etiquettes, as they are I fear, on too many occasions, and indeed I could easily mention some of daily occurrence.

Besides acute and sub-acute, there are chronic, passive, or dull and obscure internal inflammations or congestions, which depress and indispose the general system, and keep up low and irregular febrile symptoms, that require *modified* blood-letting, and other nice and accurate treatment; but which, from their masked appearances, puzzle and elude the observation of superficial judges, and have not only been termed *nervous*, *bilious*, *dyspepsia*, or *indigestion*, &c., &c., but have been, and even at present are, too often erroneously treated as such. In fact, the improvement of physic has been retarded in every age, by the employment of general terms, which refer rather to symptoms, than explain diseases; and the nomenclature of chronic complaints is particularly open to amendment, since most of the names now used

serve merely to give growth to those exuberant hypothetical systems which choke the springs of truth, and conceal the real pathology of those complaints. It is no unusual exhibition to see people with lurid, yellowish, and cadaverous countenances, intermixed now and then with a duskish livid hue, especially those who have lived freely and have rather passed the meridian of life, creeping about the streets for weeks, for months, and sometimes for years, under the unsuspected influence of those veiled complaints. Though they are at intervals better, sooner or later, however, from want of timely relief, the circulation and excitability are often *suddenly* wound up, when the last scintillation of the ethereal fire leaves for ever the grosser clay of mortals. Indeed we frequently hear of some one having been *only slightly* indisposed merely for a few days previous to the moment he fell down and expired. This is another popular mistake, for common observers are deceived by the *apparent* mildness and slightness of the precursory symptoms. People may contend as much as they please about particular features, and their effects generally; but medically speaking, I am sure many of these diseases may often be timely traced by a well directed critical acumen of the dreadful warning which the fearful signs of the countenance, confirmation of intellect, and habits of men give, frequently for a length of time, of some violent concussion in the frame of such constitutions. When this class of pallor and sallow invalids mention their situation and feelings, they commonly speak of oppression and of flutterings and tremblings, sometimes of erratic pains, and remark that their limbs grow weak, and totter on walking, &c.; but the precursory and highly important symptoms, with the seat of the disease, are generally overlooked or very indistinctly described until their attention is particularly directed to them. To lay down such directions therefore as shall detect latent inflammation, or local congestion, even when the

patient may be unconscious, or at least may not complain of its existence, is of the utmost importance. As these diseases, however, often assume the appearance of those which are too commonly regarded as purely nervous, no symptom however trifling or minute should be treated with inattention. One of the most common fallacies in medicine, and particularly with the diseases now under consideration, is to take up the most striking visible phenomena as the cause of symptoms. A very minute habit of investigation is rendered necessary to be successful in the diagnosis and treatment between nervous disorders arising from pure sensibility or debility and those of general plethora, and still more so from those of local congestion, which frequently oppress the whole system. It is surprising how much these diseases have been hitherto overlooked, both by patient and practitioner. By proper means of investigation, however, we may frequently succeed, in cases where life has almost become a burden, and even every hope of relief has been abandoned. It is a vulgar error to say such an invalid, whether young, middle aged, or old, shall be left to nature. There are others, however, who may be remarked in opposition to the above class, as they are of a corpulent habit and ruddy complexion, and *seemingly* in the height of good health; yet if we minutely trace the narrative of symptoms and phenomena of the case, we shall find that these appearances are too often but the index of a *morbid* excess of health, and that almost always the individual was in some way or other, more or less, indisposed for some time prior to a severe or fatal attack. An accurate and general knowledge of these preludes to violent and dangerous diseases, and a proper attention to them would, I am sure, contribute greatly to the mitigation of human sufferings, and be the preservation of many valuable lives. These complaints which are the occasion of so many sudden deaths in England, shall likewise, in all their Protean

shapes, come under review, and be unmasked in the pages which will follow, as well as the nature, properties, colour, and other appearances of the blood in health and disease; and the indications of treatment to be deduced therefrom.

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ERRATA.

Page 12, line 14, from top, for redicules, read ridicules
———17, ———16, ——— for colchium, read colchicum
———24, ———8, from bottom, for practioner, read practitioner
———27, ———8, ——— for disorded, read disordered
———28, 29, 31, ——— for opthalmia, road ophthalmia
———33, ———21, from top, for mestastasis, read metastasis
———39, ———17, ——— for pnieumonia, read pneumonia
———45, ———6, ——— for organization, read disorganization
———80, ———20, ——— for anotomical, read anatomical
———182, ———32, ——— for vascillating read vacillating
———210, ———16, ——— for which, read who





